

Health's

Highway

R. J. McCreedy



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HEALTH'S HIGHWAY



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R. J. MECREDY.

"Health's Highway" is based largely on personal experiences. The photo-engraving depicts one who practises what he preaches, and who started the battle of life with the handicap of bad health and poor physical development.

[Frontispiece.]

HEALTH'S HIGHWAY

BY

R. J. MECREDY

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"The Encyclopædia of Motoring"

"The Art and Pastime of Cycling"

"Mecredy's Road Books of Ireland," etc.

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PREFACE

“All time and money spent in training the body pays a larger interest than any other investment.” So wrote Gladstone, that great statesman and thinker, who practised what he preached. He based his opinions on practical experience, and brought a giant intellect to bear on his conclusions.

Let us consider what really is the interest on this investment. Perfect health I would place first in order, for, lacking this, all else may prove to be as gall and wormwood. It means both physical and mental fitness, and, from the material point of view, it represents what is equivalent to a large sum in capital. The man who possesses this, the best of the Creator's gifts, to back him in his life's struggle, is well equipped to fight his way upward, and will generally succeed in spite of all obstacles, while the man handicapped by bad health and a diseased or feeble mind probably will fail, no matter

how favourable his opportunities may be. But this is not all. Success in itself cannot give happiness: health at its best can and does give happiness, though material success be absent; on the other hand, material success without good health can but serve to increase the measure of one's unhappiness. All that the world can offer may be within grasp, but the capacity for enjoying it is wanting, and the knowledge of possession without the capacity for enjoyment is nothing less than a tragedy. It is "sorrow's crown of sorrow" minus the aftermath of "remembering happier things."

Sometimes the tragedy strikes deeper than this. Men and women who are unhealthy, physically and mentally, breed unhealthy children, little ones foredoomed to an ailing, unhappy life, if they survive the period of childhood; and for ever handicapped in their striving toward the attainment of material prosperity. Granted that they survive, these children in turn assist in the degeneration of their race and nation, the effect being both intensive and progressive. Your children, and your children's children, will unfailingly suffer for the sins and omissions of their

parents. Neglect of the cardinal principles of life will not only cause your own unhappiness and affect your worldly welfare, but will pass as a curse on to your descendants. Therefore it will be clear that Gladstone was right in his assertion.

The present work does not pretend to be in the nature of a medical or scientific treatise. Its object is not to offer advice regarding the treatment of disease by means of drugs; I hold to the opinion that such treatment is often detrimental, and, in a certain degree, based on the hide-bound conservatism of a profession, the majority of whose members are too often enmeshed by red tape and trammelled by professional etiquette. The intention is rather to prevent disease by teaching people to lead healthy lives; and the work is based on actual personal experience together with a careful study of the experiences of others.

In dealing with the subject I have earnestly endeavoured to avoid being dogmatic, and have kept ever before me the truth embodied in the old saying, "What is one man's meat is another man's poison." My sovereign safeguards, which may also

be classed as remedies, are Fresh-Air, Sunshine, Exercise, and Wholesome Food. Surely these are simple specifics, and within the reach of most people. I advocate no extreme measures. I and my whole family sleep in three-sided canvas huts all the year round, and we have never been faced with the necessity of calling in a doctor since we "returned to the land." But I do not suggest that this is an essential to perfect health, and give examples to prove that it is not so.

For over thirty years I have indulged in severe exercise, and have found it beneficial. I freely admit that in many cases exercises of a violent and competitive nature would not be advisable. Moderate exercise, taken regularly, and of a congenial nature, so that it develops the mind as well as the body, will prove the safest for the majority of people.

I am no faddist on the food question; nevertheless, I am firmly convinced that most people eat too much meat, and that they fail to take full advantage of the excellent qualities of vegetables, wholemeal bread, porridge, eggs, milk, and such-like simple food stuffs. I believe, too, that as regards

quantity most people go to excess; and, finally—and I regard this point as being of vital importance—very few people realise the absolute necessity of thoroughly masticating their food, without which proper digestion and the real nourishment of the body is impossible. In fact, many people over-eat simply because they do not masticate their food properly.

Any medical man, whether he believes in drugging or not, will admit the importance of the cardinal principles of health laid down in this book, although he may not advocate them in his practice, lest his patients go elsewhere.

My readers may ask what are my qualifications as a lecturer on Hygiene, and to this I should reply, “Practical experience, plus study of the question.” In my early youth I was miserably unhealthy, both physically and mentally. The medical fraternity seemed helpless to better my condition, and, being of a practical turn of mind, I studied the question for myself. That was some thirty years ago. Since then I have led a strenuous life; I have worked hard and played hard, and now, at nearly

forty-nine years of age, I enjoy absolutely perfect health and complete happiness.

I have long thought that the principles of Hygiene should be taught to boys and girls at school, while the mind is yet receptive. Were this so, I think that we should have less faddism on the one hand, and less scepticism on the other; the first turns men into cranks, the second leads them to scoff at all attempts to better the health of the nation.

I should like to express my indebtedness to "The Queen" for permitting me to quote portion of an article on bird life, which I wrote specially for that journal.

R. J. MECREDY.

*Vallombrosa, Bray,
Co. Wicklow, Ireland.*

CONTENTS

Chap.		Page
	Preface	v
I.	Preventive Hygiene	1
II.	Fresh Air and Sunshine ...	14
III.	Fresh Air and Sunshine : The Explanation	39
IV.	Care of the Skin and Excretory Organs	48
V.	More Personal Experiences ...	55
VI.	Vitality	61
VII.	Exercise and Recreation ...	77
VIII.	Mental Influences	98
IX.	Versatility and Variety	105
X.	The Human Interest	118
XI.	Food	127
XII.	Vegetarianism	146
XIII.	Drink	152
XIV.	Clothing	159
XV.	Cycling	169

LIST OF ILLUSTRATIONS

R. J. Mecredy	...	...	Frontispiece
In Fairy Land	...	...	<i>To face page</i> 8
Our Week-end Rendezvous at Oakwood	...	...	„ „ 12
The Ten-in-Hand Tour	...	...	„ „ 14
The Author's Fixed Camp at Vallombrosa in Summer	...	...	„ „ 16
Fixed Camp at Vallombrosa in Winter	...	...	„ „ 20
Camp at Hazel Cottage, Conne- mara	...	...	„ „ 22
Our Dining Saloon and Camp Fire at Darrynane	...	...	„ „ 24
The Ladies' Tent at Darrynane	...	...	„ „ 24
The Pass of Keimaneigh, Co. Cork	...	...	„ „ 26
Professor Eiloart's Camp at Ditton Hill	...	...	„ „ 30
An Irish Peasant	...	...	„ „ 34
Mr. T. H. Holding in his Tent at Killarney	...	...	„ „ 34
The Bloated Millionaire—Every- thing Money can buy	...	...	„ „ 40

Front view of Canvas Hut occupied by three members of Author's family	<i>To face page</i>	44
A Merry Camping Party in Glenmalure	„ „	46
Canvas Hut at Vallombrosa	„ „	62
Open-air Canvas Hut	„ „	72
Mr. T. T. Mecredy, ætat 80	„ „	80
A Week-end Camp beside the Sea	„ „	86
The Joys of Cycling	„ „	86
Veterans	„ „	102
“Dolce far niente”	„ „	102
The Irish Labourer's Cottage— as it was	„ „	108
The Irish Labourer's Cottage— as it is	„ „	112
Alone with Nature	„ „	114
In the Springtime	„ „	114
Cloud Effects at Killarney	„ „	116
Our Hostess	„ „	118
Breakfast in Glen Inagh, Conne- mara	„ „	120
An Original Dinner Costume	„ „	124
A Full House	„ „	140
A Smash-up on the Racing Track	„ „	156
By the Shores of Loch Lomond	„ „	160
Mellifont Abbey, Co. Louth	„ „	164
The Scottish Highlands	„ „	168

HEALTH'S HIGHWAY

CHAPTER I

PREVENTIVE HYGIENE

"Hygiene is of far more value in the treatment of disease than drugs."

—*Professor W. Parker, M.D.*

AN eminent specialist once remarked to me that the natural life of a man ought to be at least one hundred and twenty years; in other words, that the three-score-and-ten of to-day should be six score. He based this opinion partly on the fact that man takes a much longer time to reach maturity, in comparison with his average span of life, than any other animal, and maintained that this was wholly due to the accumulated effects of hundreds of years of gradually developing civilisation of a very artificial type.

Now, this question of health has been to me a special study ever since I left school, some twenty-nine years ago. During that period I have learned enough from actual, practical experience to leave me lost in wonder

that at such a stage of the world's history the vast majority of mankind should be so hopelessly ignorant of, or so criminally careless about, the fundamental principles of hygiene, and so apt to scoff at those who have given the matter their attention, too often regarding them as more or less harmless maniacs.

I was influenced to study this question because delicacy in early youth taught me what bad health means. I had realised to the full the truth of Milton's well-known line: "To be weak is miserable, doing or suffering." An active mind and a keen power of appreciating healthy enjoyment impressed upon me ineradicably the sober fact that perfect health is the best of all the Creator's gifts, one to be earnestly sought for if not possessed, and carefully preserved when at length acquired.

At fourteen I was a puny specimen. I suffered from frequent colds, and from complaints due to lack of vitality and physical weakness. At this period I had the good fortune to be sent to Portora Royal School, situate on the top of a wind-swept hill on the shores of Lough Erne, near the town of Enniskillen. I also had the luck to be "taken up" by a boy two years my senior who was full of energy and initiative. He was an ardent naturalist, an entomologist, and a keen collector of fossils and birds' eggs. All our spare time was spent in expeditions across country, generally carried out at a jog-trot, and always with a special

object. In this way I developed a keen love of Nature and all that appertains thereto, and at the same time the regular exercise, the fresh air, the human interest created by these various hobbies, and the salubrious site on which the school stood, were all working together to build up the constitution which I then lacked, but now possess.

At the risk of appearing egotistical, I am giving these details to enable my readers to grasp the gradual development, physically and mentally, of a sickly and melancholy youth, susceptible to any prevalent illness, into a robust man of 48, who has never suffered from any definite illness for the last 25 years (other than an attack of influenza), who was, for over a dozen consecutive years, in active training for athletic pursuits, and who, for ten years, was a scratch man on the cycle track and competed in innumerable championships and other events.

The evidence of the photographer, which appears as a frontispiece, affords more conclusive proof than any words of mine, taking into consideration the fact that as a youth I was so exceptionally delicate.

Trusting that I have now satisfied my readers that I practise what I preach, and have benefited greatly in health, prosperity, and happiness thereby, I will proceed to lay before them the broad lines of what I consider to be the golden rules of life. I do not pretend to have any purely medical knowledge; my facts were

slowly and painfully evolved from practical experience. At the time I was not aware of the scientific reasons, but I found that certain results followed a certain course of action. In many cases it was years afterwards that I learned the why and the wherefore, and realised how much trouble, inconvenience, and risk I might have avoided had the most rudimentary principles of hygiene been taught to me while at school.

This is a crying need. The young mind is receptive and easily influenced. As the boy develops into the man his ideas become more settled. He is less easily moved. In many cases he becomes dogmatic, and in others sceptical. Thus it comes about that those who recommend what appear to be new and startling changes in the ordinary methods of life are looked upon with a feeling of indulgent amusement, and their theories as the mere crazes of an unhealthy imagination.

I would lay it down as a first principle that the energies should be concentrated rather on preventing disease than on curing it. It is infinitely easier and vastly more pleasant. It is also much more economical, and if properly carried out would add at least ten years to the average life. As a sequence, man's three-score-years-and-ten might, in future ages, be prolonged to five or six score.

As things are at present, few men ever think of their health until they get ill, when they fly to the doctor

and expect him to cure the diseases or complaints caused by their own excesses or ignorance, which a little knowledge and forethought would have prevented. I hold that there is no disease which could not be prevented if only one knew how, and if modern civilisation did not tend to preclude the adoption of the necessary precautions.

The human body is a most complex piece of delicately designed machinery. Now, suppose you were the possessor of a motor car, or any other piece of more or less complicated machinery, and employed a skilled mechanic to keep it in order. What would you think if you discovered that this man, in whom you trusted to prevent wear and tear as much as possible, were to neglect his charge entirely until a breakdown occurred? Anyone of common sense knows what the result of such neglect would be. At the best, the machine would only last a short time, and never be in a state of absolute efficiency. As in the case of the human machine, such neglect would affect its vitality; it would become hopelessly incapable; it would frequently need complete overhauls; and huge bills would be run up for such "doctoring," but without adequate result. Continuous neglect and ill-treatment of any machine, human or otherwise, must result in trouble so deep-seated as to be incurable. In some instances neglect in the case of a motor car may lead to the actual and immediate destruction of the machine. In the same

way, neglect of the fundamental principles of ordinary hygiene may at an early stage cause such a complete breakdown of the system, that the best efforts of the greatest medical specialists are but waste of time and money.

The policy of prevention rather than cure would not only reduce the risk of some sudden and swift disease putting an unexpected ending to valuable lives, but would gradually build up such sound constitutions that the breed would rapidly improve, mankind would be in a better position to withstand disease, and the average of life would be rapidly increased until in process of time centenarians would become common.

But why do not all doctors preach this gospel of prevention? my readers may ask. Many have learned the science of curing by drugs, but are hopelessly ignorant of advanced forms of treatment calculated to prevent disease, or are influenced by the fact that in adopting such methods they would have the majority of this very conservative profession against them. The old system dies hard, and natural methods are only beginning to be understood. It is not so long ago that the medical profession was united against the fresh air treatment for consumptives. Even still there are some who refuse to believe in it. Only quite recently a relative of mine interested herself in a poor girl who was in the first stages of consumption, and endeavoured to get her into a consumptive hospital.

A letter from this relative lies before me as I write. The following is an extract from it:—

An effort was made to get her sent by the Union. All the Guardians voted for it, and the Local Government Board consented, but the doctor of the workhouse objected. He is an old fossil of a thing, and says he does not believe in the Newcastle treatment. He wished to treat her himself, and she spent one night under his care in order to qualify for being sent by the Union. She was put in a room with two other consumptive patients. The window was kept tight shut all the time and the fire was so hot the stove got red. This old doctor told K—— there was a large cavity in one lung, and she would be dead in a month if she went to Newcastle.

There is a still larger class, however, who do not preach the gospel of prevention simply because they recognise the hopelessness of it, and have their livings to make. I do not mean to infer by the latter statement that their action, or rather inaction, is dictated by the feeling that there would be less work for doctors if this new Gospel of Health were accepted. That might be so in some cases, but undoubtedly the vast majority of medical men are conscientious and humane. They are the victims of circumstance, however. Man is so used to self-indulgence and to calling in doctors to try and patch him up when the inevitable happens, that any suggestions as to altering his modes of life are bitterly resented, and the medical practitioner who speaks his mind freely is apt to be regarded as a faddist, who is carried away by wild and impracticable notions.

Which of us does not know of cases—frequently

elderly ladies—who suffer from ill-health due to causes directly within their own control, but who are never satisfied with any medical man who does not pander to their tastes! The doctor who points out fearlessly and truly what the cause of their illness is, and tells them the best means of preventing it, is called in no more; whereas the doctor who, by means of medicines, mitigates the effects of the self-produced ailments receives much laudation and many fat fees. It is a well-known fact that many doctors almost live on this class of patient.

Let us take the case of an average woman of the world who, at the age of 30, finds herself abnormally disposed to catching cold and a martyr to indigestion and headaches. Suppose she called in a specialist who told her that colds or no colds she must almost live in the open air, especially at night; that she must diet herself carefully, avoid all heavy meals, reduce her usual meat allowance, and retire to rest before 11 o'clock each night. What would be the result? In nine cases out of ten the patient would conclude that the doctor was a visionary theorist. The natural disinclination to make such a radical change in life would encourage her to take this view, and she would consult another doctor who was more amenable, and tell all her friends what an able man he was, and what a charming bedside manner he possessed.

The Chinese apparently recognise the vital



In Fairy Land.

[To face page 8.

importance of prevention rather than cure, for they pay their medical men so long as they enjoy good health, but cease paying them when they become ill.

Were such a system possible in this country, it would work wonders, and prove mutually beneficial to all concerned, provided, of course, that the patient could be persuaded to follow the doctor's advice. Unfortunately, our over-developed and artificial civilisation renders such impossible, and so in most cases our medical men can only do their best to mitigate the evils which follow on ignorance of the first principles of hygiene; while some who are not too conservative try tactfully to lead those who most frequently violate the ordinary rules of healthy living to abandon the more hurtful customs which are undermining their health. In a few cases the seed falls on good ground and bears fruit a hundredfold, but the vast majority of it falls by the wayside and on stony places, and the physician who adopts this course of action is ever in danger of losing his patients on the ground that he is a crank and a faddist.

There is, of course, an ever-increasing number of strong men in the profession who ignore these considerations, such, for example, as Sir Frederick Treves, who, dealing with this subject, writes:—"I look forward to the time when people will leave off the extraordinary habit of taking medicine when they are sick, and when it will be as anomalous for persons to

die of scarlet fever, typhoid, cholera, and diphtheria as it would be for a man to die of a wolf's bite in England."

Surg.-Capt. MacCabe, the author of that excellent book, "*War with Disease*" (which I can heartily recommend to my readers), deals with this burning question as follows:—"The days are fast going when anyone will think of sending for a doctor so that he may pour a sickening drug into his already sick body. The educated physician will in future be asked for his advice as to how to keep well, and when we are sick, what toxin, or bacterial poison is successfully fighting us, so that the doctor may take measures to help our white army in its fight with the invader."

Surg.-Capt. MacCabe is not alone in holding such views. There are hundreds of medical men who preach the same doctrine, and there would be thousands more if they dared. I quote a few extracts from the writings of well-known men.

"Hygiene is of *far more value* in the treatment of disease than drugs. . . . You are taught learnedly about *materia medica*, and but little about diet. . . . Of all sciences medicine is the most uncertain."—Professor W. Parker, M.D.

"The fewer remedies you employ for any disease the better for your patient."—Professor H. G. Cox, M.D.

"Drug medicines do but cure one disease by producing another."—Professor Martin Payne, M.D.

"The older physicians grow the more sceptical they become of the virtues of medicine, and the more they are disposed to trust to the powers of Nature."—Professor Alexander H. Stevens, M.D.

"Drugs do not cure disease; disease is always cured by the *vis medicatrix naturæ*."—Professor Jos. M. Smith, M.D.

“Drug remedies are themselves *causes* of disease. If they cure our disease it is only by producing a drug disease. Every dose diminishes the vitality of the patient. *Drugopathy* endeavours to restore health by administering the poisons which produce disease.”—R. T. Traill, M.D.

Surg.-Capt. MacCabe's opinions are not based on theory alone. As my readers are aware, the mortality amongst the British soldiers during the Boer war was enormous, principally from enteric. He was attached to a mobile column. He noticed that the men drank when and where they could, without taking any precautions, and, shocked at the unnecessary loss of life, he appealed to his superior officer to take some steps to stop a practice which was costing at least ten men from sickness to one by wounds. Writing on the subject, he says:—“ I at once spoke to my superior officer, a Major of the R.A.M.C., about the cause of this deplorable waste. . . . He gave me the answer I am now fighting:—‘ It is useless to try; the men will drink when and where they can.’ This answer was confirmed in substance by the combatant officers of the columns, and I had to set out to learn how the most valuable men in the kingdom—the men who had joined our army to fight our battles—were to be prevented from doing what I regarded as nothing less than ignorantly committing suicide. I, without any orders or consultation with my superior officer, who keenly resented anyone trying to do what he said was impossible, went round quietly and had a good square talk with as many of the men

as I could get an opportunity of talking to. I told them of the habits of these germs, and of the means they had of killing them if they would only take tea or coffee; or if they had to drink water, to eat something with it, so as to cause the gastric and intestinal juices to flow. I generally finished my conversation by asking them if they had anyone at home whom they wished to see again, as, if so, they would, by resisting the first sensation of thirst on the march, avoid the greatest, and, comparatively, almost the only danger of war. I found that these men, when it was fully explained, said that of course they would not drink on the march, and as a matter of fact, not a single one of them afterwards passed through my hands sick with enteric."

In his book, Surg.-Capt. MacCabe deals very fully with the causes of enteric. The germs are principally to be found in water, milk, oysters, uncooked vegetables, and butter. Foul water may be the prime source in the case of milk, vegetables, and butter. Bad drainage and bad air do not directly cause enteric, but depress the vitality of the tissues generally, and particularly the white corpuscles in the blood whose function it is to fight the germs which are constantly attacking the system, and consequently render the subject an easy prey to these germs.

The Japanese understand preventive hygiene. In the recent war, out of an army of 500,000 men, who



Our Week-end Rendezvous at Oakwood.

[To face page 12.

were exposed to great privations, they only lost 15,000 (mostly from an epidemic of beriberi) by sickness, though over 65,000 were killed in action. The Russians also took extreme precautions, with the result that they only lost 2,700 from enteric. In the Boer war the British lost 13,000 by disease out of a much smaller army in the field, and only 7,091 in action, and there were 63,644 cases of sickness, mostly enteric. In the Spanish-American war the Americans lost 150 in every 1,000.

I give these examples to prove the value of preventive hygiene.

But what are the sovereign safeguards against disease and premature old age? They are:

1. Fresh air and sunshine.
2. Exercise of mind and body—in other words, genuine recreation.
3. Care of the skin, bowels, and kidneys.
4. Suitable food in suitable quantities.
5. Wholesome and unpolluted drink, in moderation, and at proper times.
6. Suitable clothing, and protection from draughts, especially when overheated.

I shall now proceed to deal with these cardinal principles of the healthy life, both physical and mental, avoiding the technicalities of medical science as far as possible, and basing my conclusions mostly on actual personal experience.

CHAPTER II

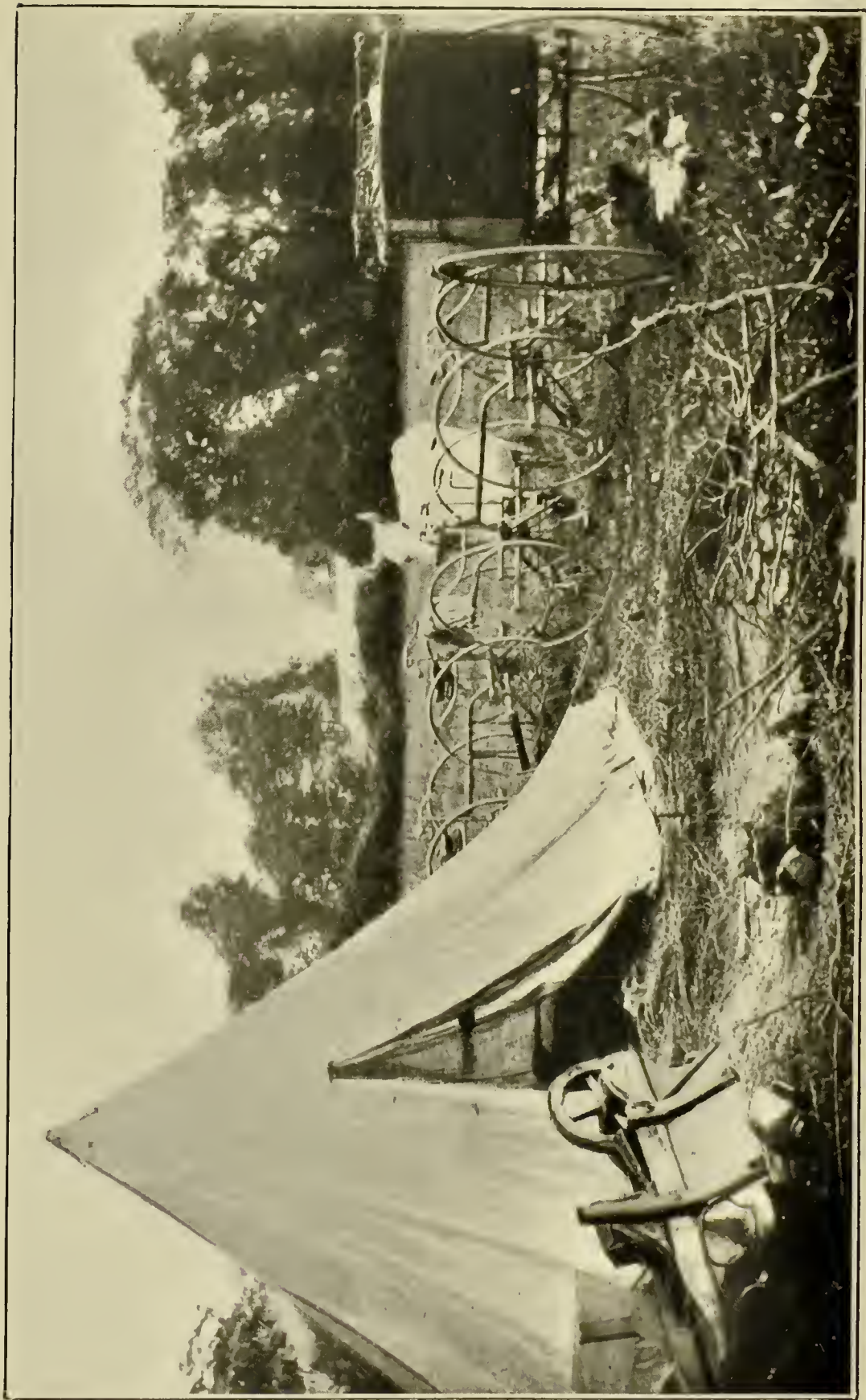
FRESH AIR AND SUNSHINE

"Nature's *materia medica* consists of air, light, temperature, electricity magnetism, influences and mechanical or surgical appliances."

—R. T. Traill, M.D.

FRESH air and sunshine are the greatest of all specifics; the nearest approach to the elixir of life that has been, or ever will be, discovered. They are God's best material gifts, and, in a sense, are free to all; but we have set up such a barrier of custom, ignorance, and prejudice between us and them that the greater part of their sovereign virtues is lost to mankind. We talk glibly of their value, but fail to take advantage of them, under the absurd and fallacious impression that exposure to air is apt to cause colds, pneumonia, congestion of the lungs, rheumatism, lumbago, and the like complaints. The few who do realise that it is impossible to have too much fresh air and sunshine—under suitable conditions, of course—are regarded as harmless lunatics, and the most trivial complaints from which they may occasionally suffer are triumphantly set down to their manner of living.

Now, I would ask my readers to consider these simple facts.



The Ten-in-Hand Tour.
An Inquisitive Visitor.

[To face page 15.]

Unlimited fresh air both by day and by night is recommended for consumptives by all modern specialists.

A large proportion of those who are not too far gone, and who are sent to some one or other of the many sanatoria which have sprung up all over the country, are discharged apparently cured.

Those who continue the fresh air treatment have, as a rule, no recurrence of the disease. Those who return to their former modes of life almost invariably succumb to this fell disease.

About 75 per cent. of the bodies which find their way to the dissecting table have the germs of phthisis in them, which germs only need suitable conditions to develop. (I do not include, of course, those who have actually died of consumption.)

Now, if fresh air and sunshine can so often cure those who are in the first stages of consumption, will they not prove more efficacious in absolutely preventing the disease? And, again, if people who are debilitated by disease do not contract colds, pneumonia, rheumatism, and like complaints, as a result of the rigorous exposure to which they are subjected immediately on being sent to a sanatorium, why should healthy, or comparatively healthy, people run any risk through similar treatment, though of a much milder form? It is against logic, reason, and absolute fact.

Right here I would like to set down what I consider

to be absolute, definite facts, based largely on actual personal experience, and partly on the experience of others.

The germs of consumption *cannot* live or multiply in pure fresh air and sunshine. The germs which produce most classes of so-called colds, pneumonia, and infectious diseases, live and breed in close, dark, vitiated air, such as is found in heavily-curtained, heated rooms, more especially if the windows are kept closed.

When the vitality is low and the body in a state of enervation, the army of white corpuscles in the blood are unable to destroy the millions of germs which find an easy entrance into the system under such circumstances.

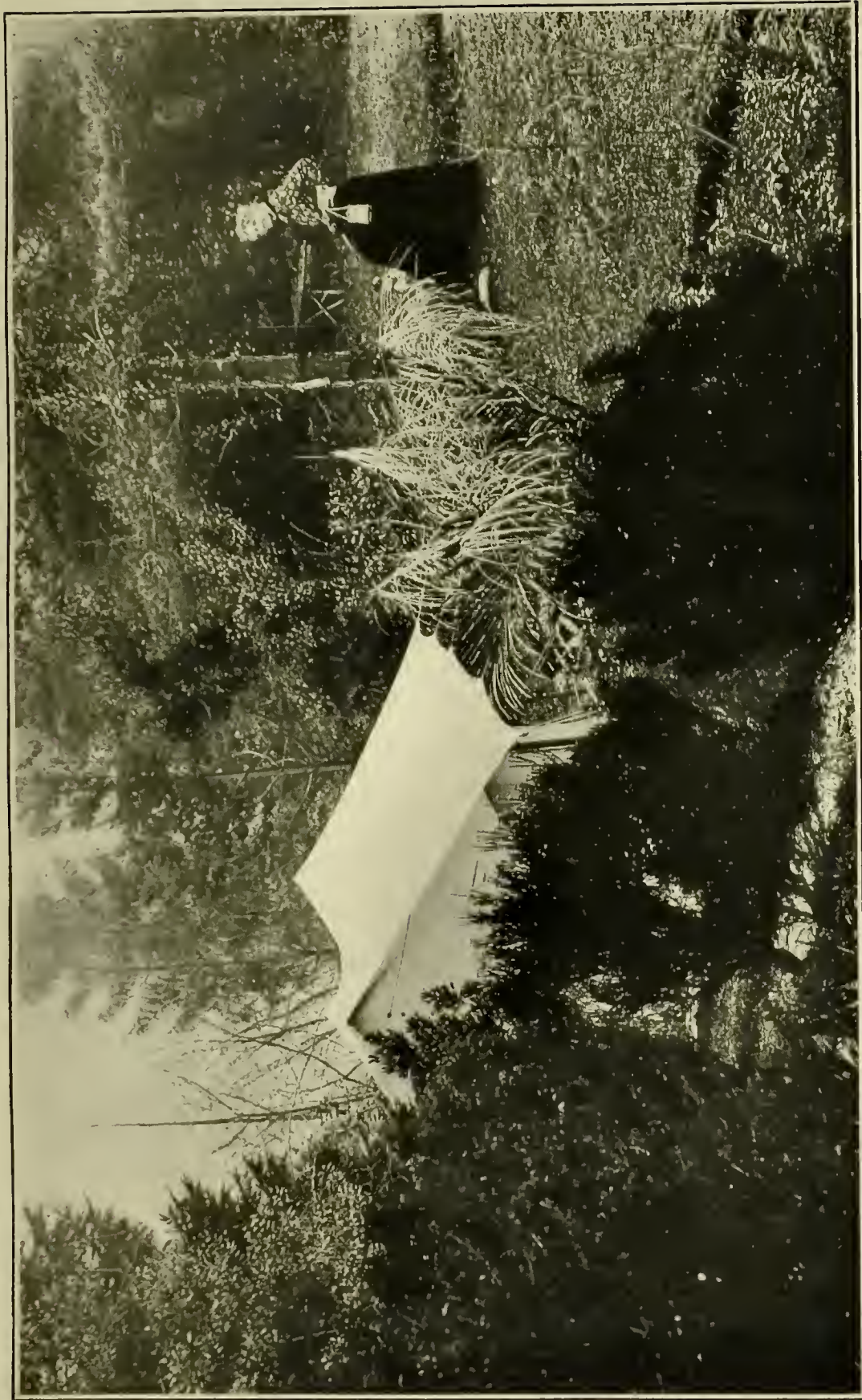
Foul air affects one's vitality, especially during sleeping hours.

The air in crowded buildings becomes vitiated, and seriously affects one's vitality, and consequently one's power to resist germs. The closer and more crowded the building is the greater is the number of harmful germs present.

It is a thousand times easier to prevent these germs from gaining a foothold in the system than to cure the diseases which they produce.

These are my Articles of Faith.

I will now endeavour to convince my readers that they are correct by detailing my personal experiences,



The Author's Fixed Camp at Vallombrosa in Summer,

[To face page 16.]

and afterwards by giving the scientific reasons for the facts, which I have learnt from these experiences.

PRACTICAL EXPERIENCES

As already mentioned, I was a delicate youth, and was especially subject to severe colds in the head and chest, even after I had attained to man's estate and my general health had improved under the influence of fresh air and exercise. I noticed especially that public buildings where crowds congregated, such as churches and theatres, were particularly apt to bring on these colds, and at one place where I resided I changed my pew in church several times in an endeavour to avoid draughts which, I found, gave me colds.

As the years went by I took up holiday camping as a recreation, though as yet quite ignorant of the potentialities of this method of life from a health point of view.

In 1888 I went on my first cycle-camping tour. Ten of us procured a Singer ten-in-hand—a serpent-like machine with a baggage wagon behind—and on this we carried out a tour of over five hundred miles around the North of Ireland, sleeping each night in a bell tent, and cooking our own provisions. We all had a dread of being exposed to the night air when asleep—a dread which is common to most people, and which evidently

dates back many centuries, as witness the well-known lines from Julius Cæsar:—

*“ Is Brutus sick?—and is it physical
To walk unbraced and suck up the humours
Of the dank morning? What! is Brutus sick,
And will he steal out of his wholesome bed
To dare the vile contagion of the night,
And tempt the rheumy and unpurged air
To add unto his sickness?”*

The first night out we pitched our tents on the right bank of the River Boyne, just beside the Obelisk which marks the spot where Schomberg crossed during the Battle of the Boyne. To make sure of excluding

“ The vile contagion of the night ”

we carefully laced up the tent door. Now, as there were ten of us in the tent it can be easily imagined what the atmosphere was like when the dew fell and closed the pores of the canvas. The foul, vitiated air which we breathed led, in my own case at all events, to the almost inevitable result—a cold, the first and last which I ever caught camping. We shut out the so-called “ vile contagion,” which did not exist, and exposed ourselves to the “ unpurged air.” Since then I have slept out of doors on thousands of occasions, winter and summer, in fog, damp, rain, snow and frost. I have sucked up enough “ humours ” to kill—

according to popular belief—a thousand Brutuses; but the only result has been a steady improvement in health.

I made the venture boldly, ignorantly, but with some misgivings. Now that I know the scientific reasons for my immunity (with which I will deal later on), I have no hesitation in recommending all, whether delicate or strong, to drink in these “dank humours” without any fear of unpleasant consequences.

Incidentally I might remark that the selection of our camping site on the occasion above mentioned very nearly led to a modern rendering of the Battle of the Boyne. At the date of this particular tour Ireland was in a disturbed condition. Landlords were not exactly in season, perhaps because the stock was running rather low, but emergency men and bailiffs were in great demand, and were regarded as fair game all the year round, whether sitting or in flight. Now, some evictions—of which we were ignorant—were about to take place in the neighbourhood of our camp, and the whole-souled patriots of Drogheda jumped hastily to the conclusion that we were emergency men, and that the ten-in-hand was a new kind of battering ram. Hence it came about that just as we commenced our nightly “sing-song” round the camp fire, the low hills to eastward, overlooking the camp, began to swarm with sullen, silent men, who sat biding their time.

At this critical stage in the proceedings the late Mr. Luke Healy, of Drogheda—brother of the famous Irish

wit, Father Healy—arrived on the scene with a cornet under his arm, and sitting down by the camp fire without a word began to play a choice selection of Fenian airs. “Ninety-eight,” “The West’s Awake,” and “The Wearin’ o’ the Green,” followed each other in rapid succession, to the complete bewilderment of the camping party. But being nearly all Irishmen and naturally polite, we fortunately made no attempt to cool his musical ardour in the Boyne; we realised that the musician was doing his best, and did not “shoot.” Gradually, however, the crowd dispersed from the hills, having no doubt come to the conclusion that men who favoured music of this nature could not possibly be traitorous emergency men. When the last loiterer had vanished, Healy laid down his cornet and collapsed. A glass of something hot revived him, and he returned home without enlightening us as to the object of his visit, or the tight corner in which he had found us. It was not until several years afterwards that he explained the matter to me personally.

But I digress.

Later came the era of cycle tents so light as to be easily carried on the bicycle, together with all the necessary impedimenta. To such a fine limit have these cycle camping outfits been reduced that it is possible to procure a complete featherweight kit for two, including tent, poles, pegs, eiderdown, ground-sheet, and cooking utensils, weighing not more than one dozen



Fixed Camp at Vallombrosa in Winter.

[To face page 20.]

pounds. (Luxuries can be added at the expense of increased weight.) This has been rendered possible by the continuous experiments and inventive genius of Mr. T. H. Holding, of 7 Maddox Street, London, W.C., who has been a devotee of the pastime for nearly forty years, and who, although now an old man as years count, is not afraid to camp out in the depths of winter.

I have organised and taken part in scores of these outings when, in fine weather or foul, we have wandered through the country carrying our houses and impedimenta on our bicycles, and spending each night where convenient. On these excursions personal luggage must be cut down to the lowest. In my own case, it generally consists of a spare woollen shirt, a pair of stockings, a toothbrush, comb, handkerchiefs, collars, and razor. Necessarily one occasionally gets distinctly damp (sometimes distinctly wet), and yet during all these years I have never known a single instance of anyone catching cold, rheumatism, pneumonia, or any such complaint, except in the case already recorded and one other, although I have seen men lie down to sleep whose only available dry garments were a spare shirt, a pair of stockings, and an eiderdown or blanket, these always being carried in waterproof bags.

Just consider for one moment what this means. Rain-sodden ground to lie upon; moist clothing; damp-laden air driving into the open tent; and yet a fresh

and healthy awakening in the morning after a night spent in sound and dreamless slumber. I have, however, known these men to catch slight colds on their return to civilisation and beds, just as horses are apt to catch cold when taken in off the grass.

In the Boer war thousands of men slept on the rain-sodden ground without any covering, but it was not pneumonia or phthisis which decimated them, but enteric, and even this might have been prevented if ordinary, commonsense precautions had been taken.

Fresh air, wool clothing, and warmth are the guardian angels of those who return to the primitive life, and the reasons I will give later. My object at present is to detail actual experiences which will prove my case.

There have come under my personal notice many examples of definite cures. I will give a typical one. Nearly seven years ago I engineered a camping tour in Connemara, the party consisting of thirty men of widely varying ages, Mr. T. H. Holding being our veteran. Amongst the party were three Manchester cyclists, and the photo-engraving opposite shows them seated in the door of their little "A" tent, which, minus poles and pegs, weighed less than three pounds. Two of the party had racking colds, which most men would have nursed in heated bedrooms, with hermetically-sealed doors and windows, and an atmosphere breeding millions of the germs from which



Camp at Hazel Cottage, Connemara.

[To face page 22.

The Manchester contingent, two of whom had really bad colds when they joined the camp.

they were suffering. In fact, one of them confessed to me that he left home with the distinct understanding that his wife would put the tent on to the kitchen fire if the cold was not better on his return. He had no fear, however, of the penalty being exacted, although he knew he was going to a district which is notorious for being one of the dampest in the United Kingdom. Within three days these men lost all traces of their colds.

Three years ago I ran a camp at Darrynane, in County Kerry, our party consisting of about twenty-five, including several ladies. The weather for most of the period was appalling. We had deluges of rain and frequent sea fogs. The campers were in a constant state of dampness, which, as the weather was warm, they entirely disregarded; in fact, the little party of seven or eight who were in my personal mess actually cooked and had their meals in the open, even when it was raining. The dining saloon was, I may mention, partially protected by a dense fuchsia hedge, and an awning of heavy calico, but the fireplace, as shown in the photo-engraving, was quite exposed.

In another photo-engraving is shown the tent occupied by my wife and a lady friend. It stood within eighty yards of the sea-shore, exposed to the west wind, which at times blew a full gale. They pitched there because they wanted air, and they got it, good measure, well pressed down and shaken together; in fact, it was

a constant source of wonder to me that the tent was not blown away. The less heroic males had their wigwams pitched in a sheltered glade, but the ladies went the "whole hog."

During the fortnight that the camp remained at Darrynane there was only one case of cold, and that was my son Eric, *ætat* eleven. As he had no previous experience of this rough-and-ready style of camping, my wife was afraid that he might suffer some ill-effects, and secured a bedroom for him in the neighbouring inn. Result—a cold.

In the camp there were no microbes! In the inn there were! *Verb. sap.*

One more example. Our camp on this occasion was pitched in the Owenreigh Glen, in County Kerry, a wild and deserted spot far off the tourist routes, and practically unknown except to cyclists. It is situate right in the heart of the mountains due south of the Gap of Dunloe, and of all the beauty spots I have ever visited, none has ever appealed to me so much. It is a narrow, winding glen, studded with rocks and mighty boulders, through which and over which rolls and tumbles an impetuous river, here gleaming white as it plunges sheer from a lofty eminence, and anon black as ink as it broadens into a deep, trout-haunted pool, where a tiny amphitheatre has been worn and fretted out of the mountain side. And the vegetation! It is semi-tropical! The foliage droops over the



Our Dining Saloon and Camp Fire at Darrynane.



The Ladies' Tent at Darrynane.

[To face page 24.

rushing waters in a thousand hues and shades which blend and harmonise in a manner beyond the skill of any human painter. On the left bank of the river it extends far upwards, opening into tiny forest glades, where the birch and the hazel, the pine and the mountain ash, combine to produce such delicate tracery that a camper in such scenes were a clod indeed if he could help feeling that he had wandered somehow into fairyland, and that any moment Queen Mab and her train might come dancing over the flower-besprinkled greensward between the clumps of giant bracken and Osmunda, to bid him welcome.

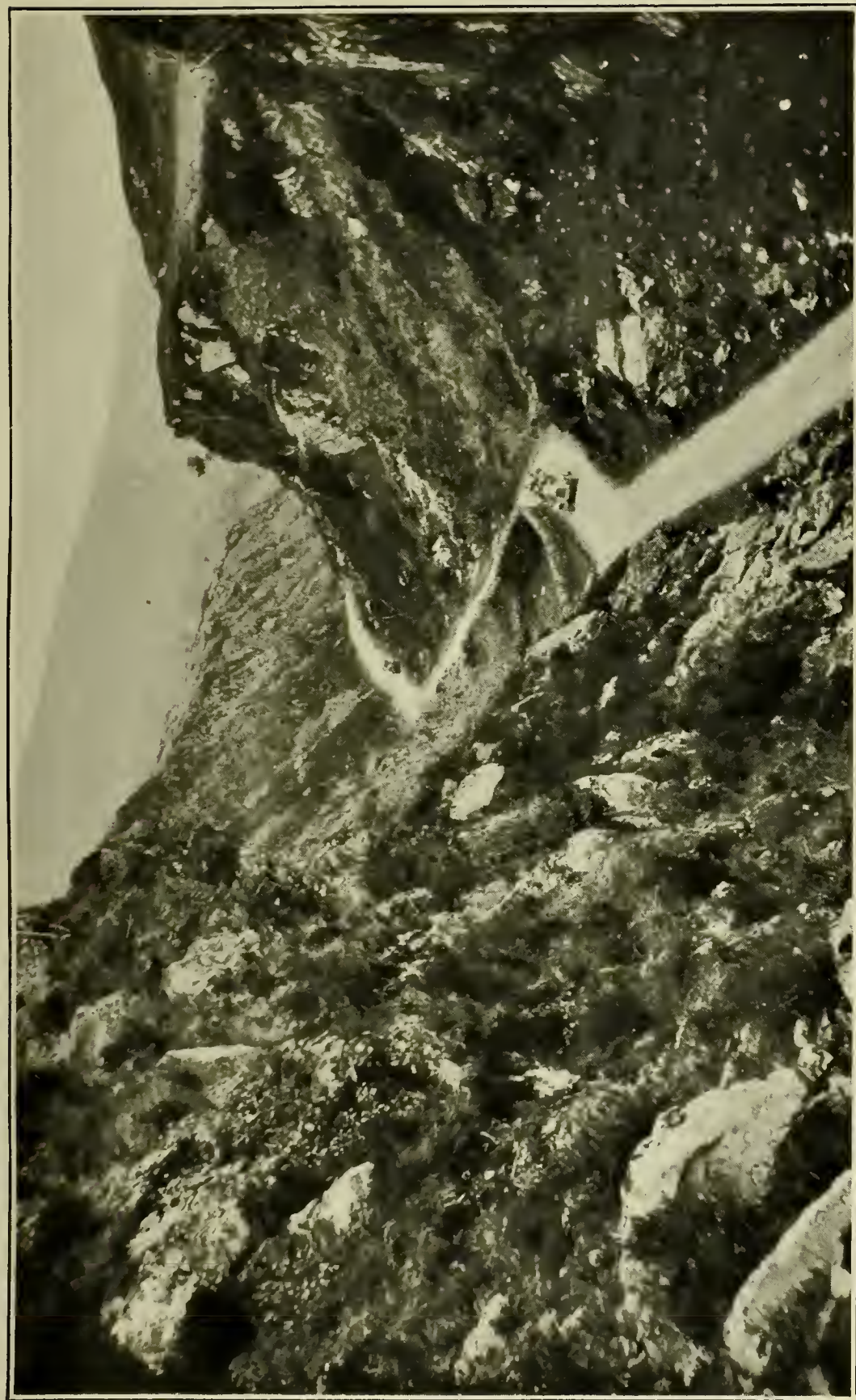
Here, as the climber ascends, the mountain tops keep ever advancing into view, at one moment partially concealed by the delicate lacework of the foliage, and the next standing forth, naked and unabashed, with their bare, rugged sides gleaming in the sunlight, only a moment later to be draped by the nebulous finery of the drifting cloud-wrack, Kerry's crown of beauty, without which the scenery would lose half its glamour.

It is an enchanted valley, this Owenreigh Glen, and the cycle camper carries the key. Here as one lies on the greensward, or in one's tent, Nature speaks with a thousand voices, unheard in the haunts of man, and there is no discordant note to break the dream. And it is a dream—a scenic dream, a dream of sound, a waking dream, and one is satisfied to lie there and dream, and dream, and dream.

It was the close of a glorious summer-day when we reached our rendezvous, *via* Killarney, Mulgrave, and Windy Gap, one of the finest rides in the whole wide world. A camping site had to be selected, and my eye lit on an emerald green stretch of sward just below a long series of tumultuous cascades. With lively recollections, however, of a plague of midges which we had encountered in Connemara, I asked a peasant who occupied the only house within miles of us what the midges were like in this sheltered spot. His reply was emphatic: "Damn cross, yer honour."

And so it came about that we camped in a tiny meadow outside the fringe of the wood overlooking the valley, and high above the stream.

Next day we were treated to a storm of wind and rain which sorely tried the miniature tents. About 10 p.m. three friends who had cycled all the way through the Pass of Keimaneigh and far-famed Glengariffe turned up tired, hungry, and drenched to the skin. It was hopeless to think of pitching their tents in the teeth of the gale, and so they slept in an open, doorless shed on the bare boards of a cart, still clad in their wet clothes, but with their dry blankets over them. To the inexperienced such an action would appear criminally reckless, but your open-air enthusiast knows how far he can venture. He has found by experience that mere damp is harmless in the open air, provided



The Pass of Keimaneigh, Co, Cork.

[To face page 26.

one keeps warm, avoids local draughts, and is clothed entirely in wool. Hence these three tired ones slept the sleep of the just and awoke the next morning fresh and vigorous, though they did complain that to turn on their narrow plank bed was impossible until the middle man gave the word!

This was an extreme case, and I should not advise my readers to take such liberties. Under similar circumstances I personally should have elected to stop in a hotel in Kenmare, which place they had passed through earlier in the evening. I only deal with the incident as one of the numerous proofs that fresh air is a sovereign safeguard against many of the ills to which mankind is exposed.

A very definite and convincing case came under my notice during my Easter (1908) holidays.

As usual on such occasions I organised a little camping trip to a rendezvous in the Wicklow Mountains, where I have rented a cottage with the express object of affording an inducement for week-end excursions on wheels, so as to provide the variety, change of air, exercise, and social intercourse so necessary to keep the system tuned up to the highest pitch. There are three nice bedrooms, a kitchen, and a good-sized sitting room. Those of my friends who ignorantly, or for other reasons, place so-called creature comforts before all else, sleep indoors, whilst the rest of us pitch our tents in the garden, and only use the cottage for

meals and for the usual social evening gathering round the sitting-room fire.

Now, Easter, 1908, though dry, was cold, but fourteen of us foregathered at Oakwood on Good Friday. Amongst the number was a lady who is not in the habit of camping, but she believes in fresh air, and consequently decided to occupy one of the little tents kept at Oakwood for the purpose. She was suffering from a chronic cold which for two months had resisted all remedies. Before that brief holiday was over she was absolutely and completely cured.

It may be argued that it was the change of air that did the trick. This may have been partially so, but from my previous experience I believe that the result was due solely to the fact that for four days and nights she was breathing absolutely pure, unvitiated air, except for the few hours in the evening when the sitting-room was occupied. Thus she was protected against the attacks of the microbes whose presence had initially caused the cold, not only during the day but at night, which is still more important, for then one's vitality is at the lowest, and the white corpuscles in the blood in their least effective fighting condition. Also, the healthy life increased the number of red corpuscles in the blood, of which more anon, and consequently raised the standard of her vitality, so that she was strengthened for the struggle against the disease from which she suffered; for an ordinary cold

is a species of disease, just as much as measles or scarlatina.

My most convincing "dreadful example" I have held over until last. Gentlemen, allow me to introduce to you my wife. We have been running in double harness for over twenty-two years, and you will admit, therefore, that I have had opportunities of judging her health.

From childhood she was peculiarly susceptible to colds of a particularly malignant type, which often confined her to bed for weeks at a time, and left her in a very feeble condition. She was one of the first ladies, however, who took to cycling (that was in 1883). She became very enthusiastic, and as the result of fresh air and exercise her health improved. She was still, however, subject to these bad colds, and particularly susceptible to chills, against which she had to take many precautions. Draughts were her *bête noire*, and with the object of protecting herself she kept the windows of her bedroom closed at night. It is an old, and at the same time very true, saying that a prophet is not without honour except in his own country. Hence, although I preached the gospel of fresh air, and especially impressed on her its importance at night, my voice was as that of one crying in the wilderness.

Again and again I tried to entice her on cycling camps. Only once she yielded, but unfortunately the

tent in which she slept was of Willesden canvas, which, being waterproof and impervious to air, is not suitable for the purpose, and in addition she carefully laced up the door at night. Result, she caught a really bad cold, and I threw up the sponge, recognising that the struggle was hopeless.

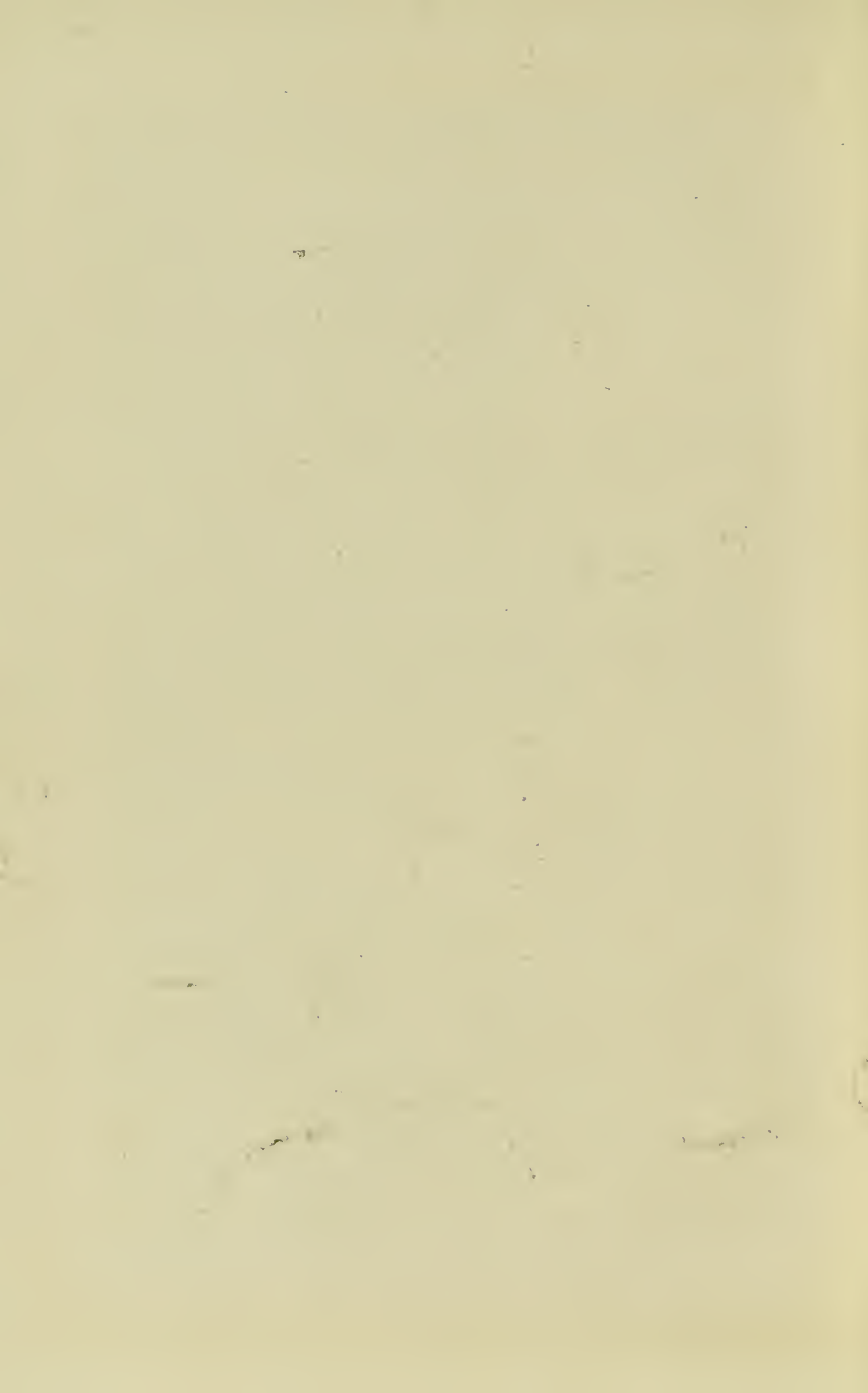
At this period I was in remarkably good health compared with my friends and acquaintances, and yet I always awoke with a feeling of overpowering lassitude each morning. My legs felt like lead; I had an almost irrepressible desire to linger between the sheets a little longer, which generally resulted in my dozing off again into a broken and unrefreshing slumber. Not until after the matutinal cold tub did I freshen up. On the other hand, when away on holiday camping tours I invariably awoke at six or six-thirty with a feeling of such mental and physical alertness that I instantly got up and dressed.

As years went on household cares prevented my wife from being so much out of doors, and her health failed. Not only did she catch bad colds on the smallest provocation, but she suffered from insomnia and anæmia; in fact, her condition became very critical. A London specialist to whom I took her prescribed fresh air and plenty of it, and insisted that her bedroom windows should be kept open, although she protested that she would get cold. There was a slight improvement in her condition as a result of this treatment.



The Healthy Life Series, No. 1.—Professor Eiloart's Camp at Ditton Hill.

[To face page 30.]



A year or two went by without very much change. In the summer of 1905 I was particularly anxious that we should spend our holidays with some friends camping in Kerry, and tried to impress upon her the rehabilitating results of such an experience. In vain. She feared the cold and exposure, and, like most people, imagined that camping meant hardship and discomfort. Consequently I had to alter my plans, and took a house on the shores of Lough Melvin in County Leitrim, and sketched out a circuitous route so as to enjoy a tour first. I explained, however, that I was out for health and enjoyment, and would not sleep in a hotel, and so we arranged that she should drive the motor car with a lady friend as a companion, whilst my eldest son and I rode a tandem push bicycle, and camped out, the motor car carrying our impedimenta.

On the second day out a kindly fate ordained that the radiator of the engine should spring a serious leak. This happened in the neighbourhood of a little provincial town, and we had to stop for the night to have the damage made good. Now, the savour of the local inn ascended unto the heavens, and when the varied odours saluted the ladies' nostrils they unanimously elected to sleep out as the lesser of two evils, and so I pitched my tent in a convenient hayfield for the two ladies, whilst my son and I slept in a smaller tent which had been carried for the chauffeur.

So well did my wife sleep, and so fresh did she awake

in the morning, that she retained possession of the tent for the rest of our holidays, and on our return home it was pitched in the garden, and except on two occasions when hurricanes were raging and we feared that the trees would be blown down on top of us, she has never slept beneath our own roof-tree since.

As winter approached I got nervous. I still had the idea that frost and snow, fog and damp, together with a nightly and matutinal pilgrimage between our residence and our canvas shelter, protected only by a dressing gown, would prove too trying an ordeal for a delicate woman, especially as she insisted on having the tent door drawn right back, no matter what the weather might be. I therefore wrote to my old friend, T. H. Holding, and put the case before him in all its bearings. His reply was brief, and to the point:—

“There is no such thing as catching cold. People catch heat. You may leave your tent door open as much as you like.”

The true inwardness of this cryptic saying was not as yet revealed to me. I had faith, however, absolute faith in my old friend, and so I fought no more against the inevitable, and buying a bigger and more substantial tent of the marquee type, settled down to spend the rest of my sleeping life beneath its snowy folds.

It was a momentous change. Since that date over four years have sped by, and during this period my

wife has only contracted one genuine cold, and that was caught by infection from a visitor who had come to stay with us for the benefit of her health, and who slept in the house, filling the air with germs. At the time a bitterly cold east wind was blowing, followed later by heavy snow and frost. True to her principles, however, my wife scorned to take refuge in the house. Personally, I must say, I was apprehensive, and urged her to spend a few days in bed under cover of an ordinary slate roof. I feared the sudden change of temperature, for owing to the severity of the weather she spent most of the day in a warm room and then at night sallied out in her dressing gown into as bitter an east wind as I have ever faced. My counsel was in vain. When the snow came, ushered in by a north wind, she spent hours out of doors, and even tobogganed with the children. After the first few days the cold—a really severe one—became gradually better without the aid of a doctor or medicines. The incident confirmed my belief in the efficacy of fresh air.

Her insomnia and anæmia have vanished. She is up at eight in the morning instead of ten, and is able to keep going all day instead of, as previously, being compelled to lie down for several hours in the day to rest. In fact, she has taken out a new lease of life.

In my own case there was not the same margin for improvement. Still, the benefit to my health has been marked. I sleep solid. I awake before seven, winter

and summer, fresh and vigorous, with no inclination for another "forty winks." I *want* to get up, and I "get," with the result that I have gained another hour a day either for work or play. I have become almost impervious to colds, with one striking exception. Once a year I visit the cycle and motor shows in London, on business bent, and I invariably catch cold, though my bottled up vitality prevents it from being serious. You see, it is impossible to sleep in Hyde Park or on the housetops, and so the deadly microbe gets an innings.

It was not long after we went out to grass that our children expressed a wish to follow suit. Two large canvas huts were erected, one for the boys and another for the three girls, close beside the parent wigwam. Since that date colds and similar complaints have practically been unknown amongst us, and our doctor has found his occupation gone so far as the Mecredy family is concerned. I do not suggest that his services will never be required again. All mankind is born to trouble as the sparks fly upwards, and sickness under existing circumstances cannot be absolutely prevented. The fact remains, however, that whereas his visits were comparatively frequent formerly, he has not been called in for nearly four years except to attend me for a ricked back, caused by a strain when engaged in an outdoor game.

These cases I have mentioned, however, are not isolated ones. I know of many similar, and yet I cannot



The Healthy Life Series, No. II.
An Irish Peasant.



The Healthy Life Series, No. III.
Mr. T. H. Holding in his Tent at Killarney.

[To face page 34,

recall any instances of a cold having been caught from camping, except in the case of my wife's initial venture and the closed tent at the Boyne Obelisk. My experience extends over a quarter of a century.

My friends who "coddle" themselves and their children as a protection against disease, and are frequently ill as a result, no doubt regard me as a harmless sort of crank. I am not surprised. Many years ago, before I knew better, I held the same views about a worthy neighbour of mine. He had learned the value of fresh air, and I remember being much shocked because the baby spent the greater part of the twenty-four hours in the garden, wet or fine. If it rained we had the advantage of a little awning. I thought that man a "crank," but that did not prevent the child thriving, nor did it provide work for the local doctor.

The case of Professor Eiloart, of Ditton Hill, is still more extreme, because, apparently, he has no house in the ordinary acceptance of the term, but simply three tents, a wooden shanty for meals, and a wooden lean-to. Mr. and Mrs. Eiloart and their family of five have been living in this way for over two years. The youngest boy, Beaupré, was born in one of the tents, and has not spent a dozen nights under a roof so far.

It appears that some four or five years ago Mrs. Eiloart was in rapid consumption, and after two summers under canvas her health was so much

improved that the whole family adopted the simple life. She is now completely cured, and the family all enjoy robust health, having even escaped the usual childish complaints, such as measles and whooping cough.

In March, 1909, there were eight inches of snow around their tents, but they experienced no inconvenience, whilst, needless to say, colds were unknown. They live mostly on unleavened bread, fruit, and vegetables.

This, of course, is an extreme case, and a truly Spartan method of life. I do not suggest that people generally should forego the usual home comforts, but I venture to state that Professor Eiloart, with perfect health of mind and body, is a happier man than the average millionaire who possesses every comfort that money can buy. Wealth cannot buy happiness, however, and in nine cases out of ten produces the opposite result. If a man can procure everything he fancies, he soon fancies nothing, and life becomes as gall and wormwood. Health can buy happiness, and if in addition one has a sufficiency of this world's goods, reasonable luxuries and beneficial recreations are enjoyed with a zest absolutely denied to the bloated and sated average man of riches. These are the two extremes: the bloated millionaire and the Spartan camper. The sensible man will draw his lesson from each and act accordingly.

The photo-engravings aptly illustrate four classes of

health-livers. The first shows Professor Eiloart, a true child of nature, living in close communion with Mother Earth. Unconventional, Bohemian, he lives his life unconcerned as to what the world may think of him, his pleasures those of the educated Nomad.

The second shows an Irish peasant in the typical costume of the country, now, alas! practically obsolete. I met him in a wild mountain glen, and he stopped to bid us the time of day and inspect our strange vehicle. He was evidently a well-to-do man in his own class, living a strenuous, healthy life, and happy on the fruits of honest and productive toil.

The third is my friend, Mr. Holding, cooking his simple breakfast in his little tent pitched on the shores of the Middle Lake, Killarney. His business responsibilities necessitate his spending most of the year under a slated roof, but when holiday time arrives he betakes himself to the wilds, and with canoe or cycle wanders far afield. Though an old man, he is full of vitality and energy, and able to hold his own against men half his age.

The fourth photograph depicts my uncle, Mr. T. T. Mecredy, aged 80, and will be found in Chapter VII. There is nothing Spartan about his system. He retires to bed about 10 p.m., keeps the windows fully open in his room, rises early, walks about ten miles daily, shoots, fishes, dances, and lives well but wisely. At an age when most men are feeble and decrepid he is

still full of the joy of living, and has a younger heart than many a man one-third his age. His system has included fresh air, regular exercise, vigorous recreations, and moderation in all things.

Contrast these types with the bloated millionaire whose wealth can buy him all things but health and happiness.

CHAPTER III

FRESH AIR AND SUNSHINE : THE EXPLANATION

"Healthy blood is the most powerful germicide extant. Pure air, pure water, personal cleanliness, model dwellings, sanitation—these are the things which dispose of disease."—*Sir William Collins, M.D.*

IN the hard school of experience I have learned by experiments on my own person, and by closely studying the effect on others, that sunshine, fresh air both by day and night (but more particularly the latter), pure wool clothing, regular exercise and recreation, have a great and marvellous influence on the health of mankind. Apparently there are no exceptions. No matter how delicate or how robust an individual may be, the effect is beneficial, with this difference, however, that the more delicate the subject, the greater will be the benefit, because there is a greater margin for improvement. This I learned, but I did not know the scientific reasons for the results which I had found followed a certain course of life, until I discussed the subject with my old friend, Surg.-Capt. MacCabe. He obtained his initial practical experience as a racing cyclist and an enthusiastic road rider, and he has since made a study

of the question of the prevention of disease. His experience as a medical man in the Boer war (already referred to) gave him a unique opportunity of putting his theory to the test, as already described. Briefly, the explanation is as follows:—Colds, like other complaints, such as consumption, pneumonia, etc., are caused by microbes which are to be found in enormous numbers in all hot, unventilated rooms where people congregate. The white corpuscles in the blood wage an unceasing war against these microbes, which, despite all precautions, enter the system in large numbers.

The blood consists of three parts—a transparent fluid called plasma, which carries to the different tissues the nourishment resulting from the digestion of food; the red corpuscles which carry oxygen to the tissues and convey back to the lungs the carbonic acid gas produced by the working of the muscles; and the white corpuscles already alluded to.

When one is in good health, and the vitality of the body is above the normal, the white army is in its best fighting trim, and it fares ill with the microbes which try conclusions with it. When the vitality is lowered, however, the white army's strength is reduced, until it reaches a stage when the microbes prevail and the subject contracts a cold or catches one of the numerous diseases, such as pneumonia or consumption, which yearly carry off thousands of the population.



The Healthy Life Series, No. V.
The Bloated Millionaire—Everything money can buy.

[To face page 40.]

Now, fresh air and exercise maintain one's strength and vitality, and keep one in a condition to resist disease. In addition to this, fresh air and sunshine are in themselves fatal to microbes. This has been proved to be the case in tubercular complaints. In referring to this matter Surg.-Capt. MacCabe says:—

I am quite sure that no one can get consumption if he lives day and night in an uncontaminated atmosphere, and hence breathes nothing but pure air. If you give your blood pure air it will kill all the tubercular germs you are at all likely to allow to find an entrance into your bodies.

Now, if fresh air is important in the daytime when the body is active and one's vitality unimpaired, it is doubly so at night, when the body is quiescent and the white corpuscles in the blood are not in the best fighting trim to attack and demolish the numerous microbes which are ever attempting—often too successfully—to make a lodgment in our bodies. It often happens that people who are much in the open air during the day and are careful to keep the windows of their sitting-rooms or offices open, sleep in stuffy rooms at night and expose themselves to the attacks of these countless microbes at the very period of the twenty-four hours that they are least able to resist them.

These scientific facts at once explained to me the cause of results which have taken me over a quarter of a century of experience to realise. I had learnt by practical experience facts which ought, in my opinion, to be taught to every schoolboy, and which very few

people indeed understand. Surg.-Capt. MacCabe's explanations at once showed me that the reason why campers who slept in damp garments did not catch cold was because not only did they spend the entire day in the fresh air, but the entire night as well, and consequently at no period of the day or night were they exposed to the attacks of microbes.

Under ordinary conditions it is, of course, impossible for people to avoid coming in contact with microbes, but if they maintain their vitality by breathing as much fresh air as possible, and taking healthy exercise, the white corpuscles will be quite capable of destroying the microbes which do gain an entry into the system. Breathing through the nose, especially at night, is of great importance, for the nose is, in a sense, a microbe-trap, being supplied with mucin to intercept these dangerous enemies of health and life itself.

In ordinary everyday life people often complain of getting cold from being exposed to draughts, and my readers will probably be surprised to learn that draughts themselves do not produce colds. They only predispose one to them. It is the germs in the air which are the cause.

Very often you come across a man with a severe cold who claims that he keeps his windows open day and night, and hence lives in pure, fresh air. I fear such a programme can only be partially carried out. We may keep our bedroom windows open, but we spend a

considerable amount of time in dining-rooms, offices, shops, theatres, churches, and such like places where the windows are not left open, and hence the germs which cause colds live and multiply, while at the same time the air is vitiated by carbonic acid gas and affects the vitality of all who breathe it.

Dining-rooms are said to be the worst of all, for they are rarely properly ventilated, and the steam and vapour from the food, in conjunction with air which has already been breathed, produce an atmosphere in which the microbes thrive. This even applies to the individual who sleeps in an open tent but who is too often exposed to bad air during the daytime. In the case of cycle camping, however, one is in the air day and night, which explains why colds under such conditions are practically impossible. In a tent the air is in motion throughout the whole of it, more or less, and does not get stagnant in any corners. Microbes require quiet to live happily and bring up their families. Of course, a laced-up tent is almost as bad as a room. There is not sufficient air space in it to ensure purity.

But, my readers may ask, how is it that one can so often locate the commencement of a cold to being exposed to some draught? The explanation is simple. The draught upsets the circulation of blood, and closes the pores of the skin, which, in conjunction with the lungs, kidneys, and bowels, are intended to scavenge the system and get rid of the waste caused by tissue

consumption. It first repels and then brings an excess of blood to that portion of the body exposed to its force, and also to the walls of the nasal cavities, where the increased blood pressure causes the membrane lining the nose to secrete too freely. This wastes the mucin, that disinfectant which the nasal secretion contains. Hence if we enter a room in which there are micro-organisms, after having been in a draught which has wasted our supply of mucin, the germs are not killed in the nose, but get into the blood alive, where the white corpuscles have to fight them. From this it is evident that if we could keep always in pure air the cold microbes would be powerless. The conventionalities of modern life prohibit this, but we can approach it as nearly as possible, and to a great extent protect ourselves against the danger.

Tuberculosis, Surg.-Capt. MacCabe states, is a preventable disease. Speaking of the bacillus, he says:

What can we do to prevent its effecting a landing in our bodies? In this we must make use of our allies, the sun and the air. The tubercle bacillus resists acids, unless concentrated; it resists heat, unless prolonged; it even resists the putrefaction of the grave, but it cannot resist the action of direct sunlight. That kills it almost immediately, if it is exposed to its rays.

He also points out that pneumonia is due to microbes.

You will not (he says) get pneumonia unless at the time you are harbouring these germs in your nasal cavity you . . . allow yourself to get so cold for a long period that your white army for the time being loses part of its vitality.



Front view of Canvas Hut occupied by three members of Author's family.

[To face page 44.]

There is one especial danger to which the athlete is exposed, and that is the ill results of chills, which may cause rheumatism or manifest themselves in some other acute form. Writing to me personally on this subject, Surg.-Capt. MacCabe says:—

What is called rheumatism is two very distinct diseases. There is the “acute rheumatism” or rheumatic fever, which *is* caused by micro-organisms; but so little is known about their life-history outside the body, so far, that I avoided it altogether in my book, where I was careful to state nothing that had not been scientifically proved. Doctors disagree over rheumatism—which means that nothing exact has been proved. The second rheumatism—the common or everyday variety—is, I feel certain (although doctors disagree over this, too), caused, just as gout is, by acid products of tissue change being retained in the system by being “precipitated,” often by too sudden chilling of the surface of the body. This stops the perspiration, which would otherwise carry off these acid tissue poisons. I deny that you can ever catch a cold—properly so called—if you keep out of foul air; but you often start from home with your nose and throat lined with microbes—even such deadly ones as diphtheria or pneumonia, and if you get a “chill” or exhausted, and the supply of “mucin” runs out, some of these will then get in, and your white soldiers will fail to kill them before they change your body into a “culture-tube,” and there divide up.

Don't forget that we—the mites called men—live on the crust of a globe which is surrounded by a sediment of microbes—mostly harmless to the living body, and that the few harmful ones are all sooner or later killed if a stream of oxygen (fresh air) is passed over them, and that none of these harmful ones can long survive the direct rays of the sun. Chills, then, I agree, cause rheumatism and predispose to “colds,” but a cold is a fight between your white corpuscles and a certain group of microbes, and can't be caught in the open. Before writing my book I read practically all the history of war, and from this one learns that men never get colds once they go away from houses, and never get sick until they foul their own surroundings; or in a word—back to the land and the fresh air if you would be really well.

I will give one more quotation from the writings of a medical man to prove that my conclusions, based on personal experiences, are correct. In an article which appeared in *Fry's Magazine*, Dr. G. R. H. Dabbs says:—

We are naturally very particular to recognise the need of pure water, I wish we equally recognised the vital need of pure air. If we paid one quarter of the attention to air risks, overcrowding would become automatically impossible. Then we often blame soil for the spread of phthisis, but overcrowding is worse than even a damp soil. That cases of phthisis do not well where the soil is damp and waterlogged is quite true, but that is different to saying that the spread of phthisis is due to damp soil. Overcrowding is far and away the most prolific of all causes. In fact I do not know—I really do not—what disease would not show a decrease as to incidence if this one terrible cause of all disease were removed. I am sure it is so with diphtheria; I am pretty certain it is the case with anthrax; and though cholera and enteric may be water-borne initially, yet if they come where segregation is excessive they spread by such segregation. If all our social legislation were directed to the ruthless prevention or cessation of overcrowding we should be—perhaps unconsciously—killing more diseased birds with one stone than we wot of. We should do more to strangle tuberculosis, diphtheria, scarlet fever, measles, small-pox, typhus, typhoid, and a host of other complaints than we can ever do now by special efforts directed against each of these diseases.

I have already referred to the value of light and the fatal effect it has on germs. Its beneficial effects in other directions are as great, but it is a new study and a new sphere of research, and medical science is only at the threshold. The discovery of the marvellous effects of the X-rays, whether artificial or derived direct from the sun, opened a fresh field of thought. Concentrated chemical rays have cured diseases such as



A Merry Camping Party in Glenmalur.

[To face page 46.]

lupus. Electric baths are highly spoken of, while sun baths have worked wonderful results. They seem to have an effect upon the whole body, and the man who desires to be healthy and strong should seize every opportunity of exposing his person to the sun. Sunlight, as well as air, is a tonic, and increases the functional activity of the skin.

CHAPTER IV

CARE OF THE SKIN AND EXCRETORY ORGANS

THE question of the treatment and care of the skin comes naturally under the heading of "Fresh Air," whether considered in relation to the function of the pores in supplying oxygen to the blood—a disputed question, I may add—or in affording a ready means of exit for the waste products of the system, and thus assisting the work performed by the kidneys and bowels. There are few diseases which are not either caused or influenced by the state of the skin, and this applies more especially to the complaints already dealt with.

Oxygen, as my readers are no doubt aware, is essential to life, and is supplied in large quantities by the lungs, where it is brought into contact with the blood, which it purifies. Some experts contend that the pores of the skin also serve as an inlet for oxygen, but this is doubtful. It is beyond question, however, that they do provide an outlet for impurities. If the pores should be absolutely closed the lungs would

prove unequal to this purifying work. Most of my readers have heard of the Roman Emperor who had little boys posing as Cupids in a public ceremony. Their skin was painted for the purpose with some special preparation which closed the pores, and every one of them, it is said, died within a short period. Whether this is true or not I cannot say, but undoubtedly the closing of the pores would cause an enormous accumulation of self-poison in the system which might have fatal results either directly or indirectly by destroying the heat-regulating functions of the skin, and so cause excessive temperature, which might produce heart failure. It will be seen, therefore, that for perfect health and maximum vitality it is essential that the pores should be as open and free as possible. It is for this reason that vigorous exercise promoting perspiration, or periodical Turkish baths, are so conducive to health. In both cases a good rubbing should follow, and great care should be taken not to get a chill. Such treatment assists the pores to free the blood from the waste products of the system, such as carbonic acid, uric acid, lactic acid, etc. These products are poisonous. Their presence not only lowers the vitality, thus encouraging disease of every kind, but makes one susceptible to rheumatism, lumbago, pneumonia, consumption, kidney troubles, and constipation.

I will now deal with the precautions to be taken and

the treatment necessary to ensure the pores being kept in proper working order.

Chills.—Exposure to cold draughts, especially when overheated, has the effect of partially closing the pores, with the risk of causing the complaints referred to. In the chapter on “ Exercise and Recreation,” I have dealt with this phase of the subject more fully.

Exercise.—Physical exertion in the open air accompanied by perspiration, has the effect of opening the pores, and causing them to function properly. In fact, this is about the very best means of ensuring the fullest measure of purification. When overheated, however, sudden cessation of this exertion, and exposure at the same time to a draught, or permitting a bitter wind to strike cold on the body, will close the pores and cause risk of trouble.

Cleanliness.—This is all-important. Frequent ablutions, preferably with hot water, are essential, or the pores will get partially closed up with dirt which may not be visible to the naked eye. After the hot water treatment the body should be sponged with cold water with the “ edge ” taken off—say at the temperature of the air—followed by a vigorous rubbing and massage, as described in Chapter VII. A cold bath is not thoroughly effective in cleansing the pores, and in any case the heat in itself is useful in opening them. Occasional Turkish baths are invaluable. A friend of mine who used to be a martyr to rheumatism and

lumbago has succeeded in keeping his old enemy at bay by taking a Turkish bath once a week. As my readers are aware, it produces a copious perspiration which carries away the poisonous matter from the system.

If this treatment is not convenient, I should strongly advise my readers to purchase a Thermal or hot-air bath, for use at home. There are several makes on the market, such as the "Gem," which is collapsible, made by the Gem Supplies Company, Ltd., 22 Peartree Street, Goswell Road, London, E.C., at prices ranging from 30s. upwards. Even the cheapest type is effective, and a bath only takes from twenty to thirty minutes. The "Gem" can also be used for a vapour bath, if this is preferred. Full particulars of its working and the precautions to be observed can be had from the manufacturers. The electric light bath is now considered by many to be the most up-to-date for the purpose, especially in connection with various colours, the therapeutic value of which is at length being fully recognised.

Massage.—Rubbing by means of a rough towel, special gloves, and the naked hand is not only of great value in connection with hot and cold baths, but even a dry massage is cleansing, and helps to open the pores. The subject is further dealt with in Chapter VII.

Clothing.—Wool is essential to perfect health. It is porous to air, warm, attracts the blood to the skin, and

is not harmful when damp. This subject is fully dealt with in Chapter IX.

It will be understood, therefore, how important the treatment of the skin is, especially as a preventive against ordinary rheumatism, lumbago, and pneumonia.

The care of the skin is not alone sufficient. The skin at best can only assist the excretory organs in their work, and it is essential that the kidneys and bowels should be in perfect order. In the case of kidney trouble a doctor should be consulted at once. Any man of common sense should, however, be able to ensure a regular daily evacuation of the contents of the bowels. Failure in this respect must inevitably lead to the re-absorption of some of the fæcal matter, which at once affects the fighting powers of the white corpuscles and tends to render the subject an easy prey to injurious microbes. Surg.-Capt. MacCabe attributes appendicitis largely to this cause, and I would strongly recommend my readers to study that portion of his book which deals with the subject. He gives valuable advice on this most vital point.

Pneumonia.—The general impression exists that damp is a fruitful cause of pneumonia. I admit that thousands have lost their lives from sleeping in damp sheets. I have dealt with the real cause of this in Chapter IX. I have never known of any camper, however, who has contracted lung trouble of any kind from sleeping in the fresh air, for under such

circumstances they are not exposed to the attacks of the microbes which affect the lungs, and those campers I have come in contact with have learnt the importance of keeping warm and wearing nothing but woollen clothing. I think I am justified in concluding that anyone adopting the mode of life which I recommend is far safer than if he lived as most men do.

Rheumatism and Lumbago.—Now, as regards rheumatism and lumbago. Here I admit my practical experience does not carry me far, and there is little use calling theory to my aid, for medical men freely acknowledge that they have no definite *data* as to what these complaints really are, nor how they can be prevented. We all know there is no definite cure; these complaints are apt to return again, despite every possible class of treatment, and the most the doctors can do is to mitigate the severity of the attack, and possibly reduce its frequency. I do not think they even know themselves to what extent their remedies are effective, or whether the improvement is solely due to natural causes.

It is generally thought that the condition of the blood is at the root of the evil, and if this is so I should think that dieting might prove effective, more especially in the direction of reducing the amount of meat consumed to a minimum, or even eliminating it from the daily menu altogether.

It is well known, however, that severe chills when

one is overheated will bring on these complaints, as, for example, should one venture out into the cold air improperly clad after having been overheated in the vitiated atmosphere of a ballroom. Surg.-Capt. MacCabe has briefly stated his opinion as to the cause. He thinks that the acid products of tissue change are retained in the system by being precipitated by too sudden chilling of the surface of the body, which stops the perspiration which would otherwise carry off these acid tissue poisons. I shall therefore confine myself to endeavouring to prove that the dampness sometimes attached to living an open air life does not increase the tendency to this complaint, and that, in all probability, fresh air and sunshine protect one from the foe to a certain extent, provided, of course, that reasonable precautions are taken, such as wearing wool, keeping warm, and, above all, avoiding draughts, especially when overheated.

Exercise is of special importance in the case of rheumatism, for it tends to keep the pores of the skin open, and so helps to clear the system of waste products.

In brief, my contention is that fresh air and sunshine, combined with proper exercise, purify the blood and greatly increase the vitality. In fact, they get the body into such a splendidly healthy condition that one's powers of resistance to all forms of disease are increased.

CHAPTER V

MORE PERSONAL EXPERIENCES

I MUST apologise to my readers for once more imposing upon them personal experiences, but it is only by facts for which I am in a position to vouch that I can place before them evidence which, I hope, will prove convincing. I have been subject to rheumatism of a comparatively mild type since 1881. The cause was, I believe, night-fishing without proper protection from the cold. Only once have I had anything in the nature of a severe attack, and that was when confined to bed for five weeks as the result of an accident on the racing track. Very frequently, however, I have suffered from mild attacks in my right shoulder, where I was first affected after my fishing excursion in 1881, and in my left wrist, which I sprained in a fall from my bicycle in 1884. Since I have taken to sleeping out winter and summer, however, I have been much less troubled than before, but not wholly cured, for it is still in my system, hence the *data* I can offer on this subject is not so convincing as in the case of ordinary colds.

Certainly sleeping out can supply negative evidence.

I can never recall during all my numerous holiday camping excursions having had even a mild attack of this complaint. Neither do I know of any of my friends who have suffered from the complaint owing to exposure to damp and wet when sleeping under canvas.

I remember one special occasion when it really would seem as if I were tempting Providence. About seven years ago I undertook a week-end camping trip with a friend late on in October, when the nights were damp and bitterly cold. It so happened that I was suffering from such a severe nip of rheumatism in my right shoulder that I could not turn my head to right or left without a keen twinge of pain. After a ride of about forty miles, we pitched our tent beside the river Liffey at Poulaphouca, and slept on a heap of wet hay, with a thin ground sheet under us. The night was unusually damp and the cold was intense, but when I awoke in the morning the rheumatism had completely gone.

I would not for one moment suggest a bed of damp hay as a cure for rheumatism, or even maintain that camping out that night actually cured my attack. It did not, however, prevent the rheumatism from leaving me. As a matter of fact, I knew I was incurring no risk, previous experience having taught me that provided I avoided chilling draughts when overheated and kept warm when damp, no harm resulted. In all probability the vigorous exercise and resulting perspiration effected the cure by opening the pores of the skin.

I might mention that my wife has also been subject to rheumatism for very many years, but since she has adopted the simple life the attacks have been few and far between, and of a very mild nature. Unquestionably the purer blood, increased vitality, and better health resulting from an open-air life have considerable influence on this insidious disease.

Of lumbago, which is rheumatism of the muscles of the back, I have also had some experience. I first contracted it in 1892 on the occasion of a cycle ride in Surrey with Mr. S. F. Edge, now a famous motorist. We had ridden far and we had ridden fast, and, as evening fell, encountered a dense, cold, clammy mist. I foolishly was not carrying extra garments for such an emergency, and got severely chilled, with the result that the acid products referred to by Surg.-Capt. MacCabe were precipitated. It took me nearly six months to get rid of that attack. I now invariably carry a gabardine cape, which not only protects me from rain but, when occasion requires, shields my heated body from cold winds. If this is not sufficient I find a sheet of brown paper a perfect chest protector in an emergency.

My second attack some years later afforded another striking example of the truth of Surg.-Capt. MacCabe's theory. It was a blazing hot summer's day, and I had cycled from Dublin to the sand hills at Brittas, south of Wicklow, a distance of some 38 miles. I had ridden

fast and was in a great heat when I arrived, and, without a moment's delay, threw off my clothes and plunged into the sea. I enjoyed that swim, but emerged with lumbago. It was a foolish act to bathe when overheated, but we live and learn. If only I had been afforded an opportunity of learning before living I might have been saved much inconvenience, and some pain!

The third occasion was in July, 1908. One of my daughters was performing at a theatrical entertainment at the French School, Bray, and naturally wished me to be present. It was a particularly hot day, and although I rode slowly I was distinctly warm when I reached the big schoolroom where the play was to take place. It was crowded with the friends and relatives of the school girls, and I had to stand in the doorway at the end of a long passage. All the windows were, of course, open, and a half gale of cool air blew on my warm, damp back with chilling effect. There was no escape; I knew I was running a risk, but foolishly chanced it. That night my old enemy had me in his grip once more.

And now attend to the sequel. For four weeks I was, comparatively speaking, crippled. I could not bend my back, and suffered much pain. My friends—well-meaning, but ignorant Job's comforters—said:—"I told you so! What could you expect if you sleep out?" It was useless to explain that the trouble was

not caused by sleeping out. My experience in this Vale of Tears has taught me that if anyone flies in the face of time-honoured customs he is looked upon as a misguided enthusiast with a "slate loose," and whatever happens to him his Job's comforters say: "I told you so." When he finally shuffles off this mortal coil, as we all must, they repeat the parrot cry even at his funeral!

At the end of four weeks, during which I continued to sleep out, the pain moderated, and although I still could not bend my back, I started on my motor car for Connemara. Here I camped on the bogland for three of the wettest and stormiest weeks I have ever spent under canvas. It was quite like my luck! There had been a long continued drought before I arrived, and the parish priest had been asked to pray for rain. He did so, and after a few days some heavy thunder showers fell. A parishioner thanked him, no doubt in the hope of further favours, to which his reverence replied:—"And a damned troublesome job it was, too!" Already the cloud in the shape of my motor car was on the horizon; after that, the deluge.

For three weeks I was damp. I went out trout fishing on the lakes and got drenched. I took long drives, despite the weather. (Needless to say, I kept warm by means of abundant clothing, and took care not to risk getting a chill.)

In a week the lumbago was gone!

Now, from these experiences I deduce that I was correct in concluding that chill draughts on an overheated body are likely to cause lumbago, but that dampness *per se* is not harmful, provided that one wears woollen clothing, keeps warm, and avoids chills.

I will conclude this chapter with a very striking example of the importance of keeping the skin in perfect order. It is from a book written by Dr. Gordon Stables many years ago:—

My rheumatism used to come on periodically, and last for six weeks at a time, during which I could hardly stand on the floor nor sleep in bed without feet and legs elevated. Since I adopted cycling as an exercise, and thus found pleasant means to keep my skin in perfect working order, I have never had a single twinge of rheumatism. . . . Cycling has banished my pains and lightened my mind, and made me physically and mentally double the individual I was that mournful morning when I left Haslar Hospital leaning on a stick.

CHAPTER VI

VITALITY

N^O doubt my readers will not question my facts, and will take my word for them.

I can quite imagine, however, that many of them may be inclined to join issue with me as regards the conclusions which I have deduced from these facts, and attribute the results to mere coincidence.

They have a plausible line of argument to follow. They can point to many instances of healthy, athletic men who have reached a ripe age without falling victims to disease, although the simple life has never appealed to them. They maintain a state of rude health, and seem to be proof against infection.

It is a well-known fact that so long as a man is full of vitality and in good bodily and mental health, he is almost proof against the diseases caused by microbes and infection, because the white corpuscles in the blood are in such splendid fighting trim that the microbes are annihilated before they can get a footing in the system and begin germinating. Foul air does not seem to affect him, and when epidemics attack his household, he escapes scathless. At the same time he is sitting on the edge of a volcano, which may, or may not, break out. His enemies are ever round him watching for a

flaw in his armour. At any time circumstances may conspire to affect his health. Overwork, combined with mental trouble, may run down the system, lower the vitality, and the ever-ready microbes seize upon the opportunity. If he spent his sleeping hours in pure air there would be no microbes present to take advantage of his temporary weakness, and if, in addition, he could manage to spend his waking hours in a similar atmosphere, his armour of proof would be equal to all emergencies, until he sank into the grave through absolute old age.

The cases of men, however, who have successfully ignored such a cardinal essential of a life free from disease as pure air, are comparatively few, and, as a rule, there are exceptional circumstances to account for their immunity. Some people are born with magnificent constitutions, and in every sense are well equipped for the battle of life. If, in addition to these natural advantages, they observe most of the rules of hygiene, take plenty of exercise, and clothe themselves properly, they may with luck be able to sleep in comparatively foul air without suffering apparent harm. It must have some effect on their vitality, however, and they are always in the position of fighting a hidden enemy which never fails to seize an opportunity. It becomes simply a case of the survival of the fittest.

If every one in the community, weak or strong, took precautions to ensure the greatest possible fitness



Canvas Hut at Vallombrosa.

[To face page 62.

The hut proper is made by stretching the canvas over a wooden framework, to which it is secured by brass tacks. The flysheet, it will be observed, is carried to outer rails of sufficient height to keep it clear of the roof of the hut, even when weighted with snow. The door is always kept open, as in the photo.

according to their respective physical attributes, the average age of mankind would be greatly increased, though necessarily the span of life must always vary considerably in individual cases, due to the differences in constitutional and physical powers and the chances and vicissitudes of life.

There is much summed up in the word "Vitality," and my remarks on the subject are intended as a prelude to some interesting personal experiences, showing the effect of fresh air combined with exercise on one's physical powers.

At the end of 1893 I retired from the racing path after twelve years' constant training for speed contests, during ten of which I was on the scratch mark. I had never gone in for distance work either on road or path. In the spring of that year I happened to pace during portion of a twelve hours' track race. I was mounted on a heavy roadster tandem, and, finding that I nickered so well with my companion, an unknown rider, I suggested that we should have a try for the twelve hours' tandem road record, about three weeks later, on my return from my annual holidays. My friend agreed, and spent the intervening three weeks training in the orthodox manner by riding long distances, and by careful dieting.

In my own case, however, I was unable to go in for any regular training, for I had arranged to spend my holidays camping at Killarney with a party of

twenty-four friends. We camped beside the middle lake. We rose early, retired late, and our days were spent fishing, boating, climbing the mountains, and making short excursions on our bicycles which entailed much hill climbing. We ate what we could get, and during that period I constantly violated most of the accepted canons of training, and had no opportunity for carrying out sustained efforts over long distances, which would undoubtedly have assisted me in my proposed trial.

The result was the finest performance I ever achieved or shared in. We covered $204\frac{1}{2}$ miles in the twelve hours, which, although accomplished on Irish roads, was, at the time, world's record, and still stands as the Irish record.

This result, so far as I was concerned, was undoubtedly due to the healthy natural life which I led during those three weeks. Day and night I was breathing pure air. I had no mental trouble or anxiety, and on the day of the performance was in a state of abnormal physical and mental fitness, although undoubtedly some distance training would have been of advantage.

And now I will give an example of a negative nature. In 1900, when I started the *Motor News*, I was woefully ignorant on the subject of motoring, and I used frequently to cycle over to the house of a doctor friend some five miles distant, who was an expert on motoring,

and who used to check my technical articles for me. I always keep in a condition of cycling fitness, and on these rides to my friend's house my superfluous energy used to find vent in travelling fast and rushing the hills. Those who have not experienced this sensation of superabundant energy, which follows perfect physical fitness, can hardly realise the exquisite pleasure which it affords. It makes one realise that life is really and truly worth the living.

Three hours later I used to crawl home almost in a state of collapse. My legs felt like lead, and every up-grade was a wearying labour. My friend was a delicate man, subject to colds, and used to sit in a study with doors and windows closed, and heated by an air-destroying gas stove. The extreme heat and vitiated air combined seemed to poison my whole system, although my friend, who spent much of his time in this health-destroying atmosphere, noticed nothing peculiar about it. The fact, however, that I was accustomed to breathe pure air made me especially susceptible. That fact does not detract from the value of the lesson to be derived from these experiences. A man may, to a certain extent, become habituated to unhealthy surroundings, and if it were not so the death rate would be very much higher. This, however, does not alter the fact that if the surroundings are unhealthy they are calculated to work insidious damage.

I had an even worse experience in Connemara in

1887. I had organised a big cycle touring party, and we spent a night in the little town of Oughterard. We filled both the little hotels to overflowing, and I found myself with two others in a tiny room which just held two beds, there being only room to walk between the sides of the beds and the outer wall. There was but one small window. Now, one of the party was an enthusiastic photographer, and in order to change his plates he stopped the window up with a pillow, and got under the bed. Here fatigue overcame him, and he went to sleep. When I awoke the next morning that room was a mild edition of the Black Hole of Calcutta. The air was simply poisonous, and I don't think I ever felt so ill in my life. Throwing my clothes on hastily, I sallied out into the fresh air and sat in the garden, completely overcome by a feeling of nausea which seemed to have sapped all my energy. Later, when we started for Recess, 17½ miles distant, I could hardly propel my machine. I had to dismount at every hill, and the remainder of the party reached Recess nearly an hour before me. It took me days to recover from the effects of this poisoning.

An incident which occurred at a Boys' Brigade Camp in the North of England illustrates the danger of a lack of ventilation, even when under canvas. Bell tents were used, which are notoriously badly ventilated and unhygienic, and which become regular pest houses if the small triangular door is laced up. It was a damp,

misty day which did not encourage outdoor pursuits. Three or four of the campers retired into a bell tent to avoid the mist, and foolishly laced up the door to make sure of excluding it. The wet effectually closed up the pores of the canvas, making it almost impervious to air, so that the only communication with the outer air was through the tiny and hopelessly inadequate ventilators near the top.

The result was disastrous. Two of the party were removed in an unconscious condition, and the others were almost in a state of collapse. They had been poisoned by breathing the foul air and the carbonic gas from their own bodies.

This, of course, is an exceptional case, but it illustrates the risk, run to a greater or lesser degree, when provision is not made for the free egress of foul and ingress of fresh air.

Campers in their novitiate are very apt to make this mistake, so it is not surprising that less progressive people dread the cold, damp night air, as though it were the plague.

Four years ago I was with a party camping in Kerry. On the second night three Englishmen arrived, and I noticed as I passed their tent on my way to bathe, the following morning, that the door was completely shut. As I returned they had just opened it, and I put my head in to bid them "the top of the morning," but beat a hasty retreat. The air was absolutely foul.

Although unpleasantly apparent to me, the inmates of the tent had not noticed it, because they had been in this vitiated atmosphere all night. I explained the matter to them, and after that they slept with their door open.

Friends often enquire if it is not necessary to have a great many blankets to protect one from the cold night air, and when I reply that fewer are required than when sleeping in a room, even though the windows are closed, their faces indicate polite scepticism. And yet it is a fact. When circumstances compel me to sleep in a house, I find it necessary to use considerably more clothing than when breathing pure air, and pure air alone.

This phenomenon, as I considered it, puzzled me vastly at first, until fuller knowledge suggested that the reason was to be found in the fact that sleeping in absolutely pure air improves one's vitality to such an extent that cold can be better resisted, and consequently such heavy clothing, which in itself is unhygienic, and tends to hamper the free breathing of the skin, is not required. I consulted one or two doctor friends on the subject, and they confirmed me in this opinion.

I would ask Doubting Thomases to make a mental note of the point. Vitality is life itself. It means health, which is generally synonymous with happiness. It means physical fitness, and, most important of all,

it means the ability to fight intruding microbes, to resist disease should the outworks be carried, and to emerge from the ordeal with the smallest possible amount of damage. Fresh air is the first and best builder up of one's vitality. There are other factors, however, which I will deal with later, such as exercise, recreation, food, clothing, regular hours, variety and change of scene; but fresh air, and plenty of it, is the corner stone of the temple of health.

In the case of those who are horrified at the mere thought of exposing their tender and delicately nurtured persons to the air, whether by night or day, I would draw attention to the accepted treatment for consumptive patients. These poor creatures are often in a hopelessly feeble condition. Their vitality is dangerously close to zero, and physically they are wrecks. They are taken from their homes, where too often their friends with mistaken kindness have protected them from every harsh wind and have kept them in a warm atmosphere, and without any breaking-in process they are placed in a semi-open building where, day and night, they are fully exposed to the air. These people do not catch cold, and if not too far gone, their health rapidly improves, although the dreaded germs which might have been repulsed by healthy living have obtained a firm footing in their system.

If people who are diseased can stand this treatment

and suffer no ill, why should comparatively healthy people dread far less heroic measures?

Again, consider hospital patients. No matter what their previous method of life may have been, or the disease from which they suffer, they are placed in wards with wide open windows which are innocent of carpets, curtains, or any such hiding and breeding places for microbes. The argument is unanswerable.

But why, my readers may ask, is sleeping in a tent or open-sided bungalow more healthy than in a room with open windows? In an ordinary room it is nearly impossible to ensure perfect ventilation. The hot, vitiated air naturally rises, but there is no outlet at the top, and so it has a tendency to swirl downwards again and get mixed up with the current of fresh air. Part is carried with this current up the chimney, or under and above the door, but a large proportion is re-breathed; diluted, no doubt, with fresh air, but still poisonous. Also, the carpets, curtains, and sheltered corners are supplying breeding places for dangerous microbes, which swarm in most houses, and are present in all. The better the room is ventilated and the barer and cleaner the walls and floors, the fewer germs there are, but, even under the best circumstances, they find a hiding place where they can live and breed, and direct their attacks against the sleeper.

The conditions in a tent like my marquee, shown in the photo-engraving, are different. It is 9 feet high

at the ridge pole, and 9 feet wide by 10 feet long. One end is absolutely open in all weathers, even when the snow lies deep and heavy, as was the case when the photo. was taken. The hot air rises towards the ridge pole; part percolates out through the pores of the canvas (which are always open, as the fly sheet keeps the top of the tent dry); the rest streams along by the ridge pole and escapes by the open door, while the fresh air flows in underneath. Hence the sleeper never inhales the same air twice. Every mouthful—if I may use the term—is fresh and sweet. Microbes cannot live in such air, and there are no draperies nor curtained corners providing shelter for stagnant air in which they can hide and breed, as in rooms. Thus the sleeper is absolutely free from the attacks of the microbes during the hours of the twenty-four when he is most susceptible, and he does not re-inhale his own poisonous exhalations.

Then, again, the camper gets the full benefit of life-giving sunshine, Nature's great safeguard against disease of all kinds. The sovereign powers of sunshine are as yet but dimly understood. Light finds easy access through the roof and sides of the canvas. At first this may prove disconcerting on a bright summer morning, but one quickly gets used to it, and the necessary fly sheet tempers the heat which might otherwise prove trying.

In another direction also the tent scores over the

room. I have already pointed out that draughts are peculiarly dangerous when one is in a perspiration from physical exertion. Even when one is not overheated, however, a purely local draught may cause bad results, especially at night; whereas a full volume of air, which can be provided against by suitable clothing, is innocuous. Some people are more susceptible to such draughts than others. I know people who can sleep directly between an open window and an open door without ill-effects, while to others, like myself, it would mean an almost certain cold. In many bedrooms it is difficult to avoid such draughts. Then, again, on wet, stormy nights the rain will blow in through an open window and do much damage, and consequently the window is generally closed under such circumstances. In a tent it is a simple matter—and I have found it essential in my case—to close all apertures except the open door. One's sleeping apartment then consists merely of a roof and three walls, and there is a full volume of air without any through draught.

The best designed canvas sleeping apartment that I have seen is used by Dr. H. N. Marrett, Merivale Sanatorium, Sandon, near Chelmsford, in that it affords the maximum of air and light, while the inmate can at his discretion close the side or sides exposed to the wind and open those to leeward. The photo-engraving gives a good idea of its construction.

It will be noticed that there is a wooden framework,



Open-air Canvas Hut.

Designed by Dr. Marrett, Merivale^aSanatorium, near Chelmsford.

[To face page 72.

and the upper portion of the hut consists of panels with canvas stretched tightly over them. These fit closely into position, so that when in place draughts cannot penetrate. They can be raised by means of pulleys and can be left partially open if required. The lower portion of the building is divided into squares filled up by canvas which can be stretched taut by means of a roller working in slides between the uprights. The occupier of the hut, therefore, can have it wholly open, open at any particular side, or open only as to one or other of the upper panels, to suit the different weather conditions.

The flooring is $1\frac{3}{4}$ in. planks laid upon joists. These shelters are 12 feet square, with a slanting roof of canvas, the highest part being 8 feet and the lowest part 5 feet 6 inches. The canvas of the roof is water-proofed, but in such a manner as to allow the light to pass easily through it, linseed oil being used for the purpose. The canvas used for the sides and doors is of such a mesh as to prevent the pores being closed when the material becomes wet with rain or snow, and it is found that when the canvas is wet it becomes more transparent to light.

This construction is much better than wooden shelters worked on pivots, because with the latter it is very difficult to avoid a draught under all conditions.

Another great advantage of the use of canvas is that neither fog nor mist enter the hut, no matter what the

state of the external atmosphere may be, provided the shutter or shutters to windward are closed. This is explained by the fact that the canvas acts as a filter to the air, which passes freely through, but leaves the particles of moisture behind. This characteristic is important, as moisture is not wholesome, whether in the case of an invalid or the robust. Under certain conditions ordinary open air bungalows are often full of moisture, and metal quickly becomes coated with rust, whereas this does not occur in properly designed canvas shelters.

Personally, I do not like the idea of a waterproof roof which is impervious to air. In cases of consumption it may be important to secure the maximum of light, but for ordinary use I think quite sufficient can penetrate through the back, front and sides, and that there should be a double roof either of canvas or of wood. It makes the tent cooler in summer and warmer in winter. In fact, I contemplate building such a sleeping apartment of the same shape as the marquee which I at present use. My idea would be to construct a wooden eaves-roof about 10 feet high at the ridge and extending some 2 feet beyond the sides of the hut proper. Under this I would build a canvas dwelling with a space of 1 foot between the highest point and the wooden roof, so that air would circulate freely. The triangular space at the top of the front and back of the hut could be filled up with a neatly

fitting panel with canvas stretched over it, and hinged in three places to the cross-piece of the framework of the building, so that by the use of a rope and pulley it could be allowed to drop outward into any position between the vertical and the horizontal. Similarly I would have the rectangular back and front portions of the hut closed by means of canvas on a roller, the roller sliding in grooves between the upright poles, as in Dr. Marrett's hut. By this means the back and front of the hut could be left partially open or wholly open, as occasion demanded, or portion of the back and front could be manipulated with ease, so as to suit every condition of weather.

Dr. Marrett's hut costs about £25, but the construction of one on the lines which I indicate would be considerably cheaper.

But a tent or canvas hut is not absolutely essential. A scientifically constructed wooden hut will give excellent results, though not as satisfactory as the canvas variety. It should have a properly protected ventilator at the highest point of the conical roof, so as to induce a slight upward draught which would sweep the vitiated air with it. The panels forming the opposite side of the hut should slide, so that the ones facing the wind might be kept closed and the others wholly or partly open. Such a sleeping apartment might include all the comforts of an ordinary room, except the curtains and carpet.

I should like to see a complete revolution adopted in the construction of dwelling-houses, whether the owners slept in them or not. There should, in my opinion, be only one storey. The roof of each room should be conical, with air extractors at the highest points, and large windows should be fitted, so arranged that at least one could be opened without exposing the room to the full fury of a rain storm. Such dwellings would, I think, be hygienic both for sleeping and general living purposes, and if I were building a house I would have it designed on such lines. I would also have all the sanitary arrangements independent of the dwelling-house, as is the case when sleeping under canvas, for by this means all danger from sewer gas, which kills thousands annually, would be obviated.

Meanwhile, however, we must take things as they are, and endeavour to neutralise the unhygienic features of our existing residences as far as possible.

CHAPTER VII

EXERCISE AND RECREATION

"Better to hunt in fields for health unbought,
Than fee the doctor for a nauseous draught;
The wise for cure on exercise depend."
—Dryden.

FRESH air is not sufficient to ensure good health; exercise and recreation, both mental and physical, are essential, and should as far as possible be undertaken in the open air.

Early in 1898 I was afforded a very significant example of the marvellous effects of such a combination. In the Easter of that year I engineered a mixed touring party of over twenty to Connemara. We had with us a professor of the Royal College of Surgeons of Ireland, whose life has been largely devoted to scientific research. On the day of our arrival he made a vampire-like descent upon his fellow *voyageurs*. Blood he would have, and every individual member of the party was pursued with sleuth-hound persistency. A few stood firm, but about twenty allowed him to take samples, which he procured from the top of a finger with the aid of a needle, and safely corked each into a tiny bottle. Ten days later, at the conclusion of the trip, further samples were taken despite our protestations,

and our bloodthirsty friend proceeded to examine the various specimens.

It was a happy gathering. We were all personal friends, and each did just as he or she jolly well pleased. Most of the party joined the organised cycling trips; others fished or walked, but all spent the day in the open. In the evening they foregathered, and dance and song and endless jokes made the time pass all too quickly. The trip was a complete mental rest for those whose life was spent in brain work, and afforded an abundance of healthy exercise for the body in an atmosphere which acted like champagne on the spirits.

The result of the microscopical examination above referred to was remarkable. It showed an increase of red corpuscles in the blood in every case, the maximum result rising as high as twenty-five per cent. in the case of two ladies who were inclined to be anæmic.

Now, what I desire to impress on my readers is that daily exercise, daily recreation, and fresh air day and night will maintain this state of efficiency, except, of course, under exceptional circumstances.

I know that holidays for the majority of people are few and far between, and that in some cases they do not prove as beneficial as might be expected, for the holiday-seeker—who is frequently run down by over-work, long hours, and mental worry—is often inclined to over-exert himself, and returns to his business but

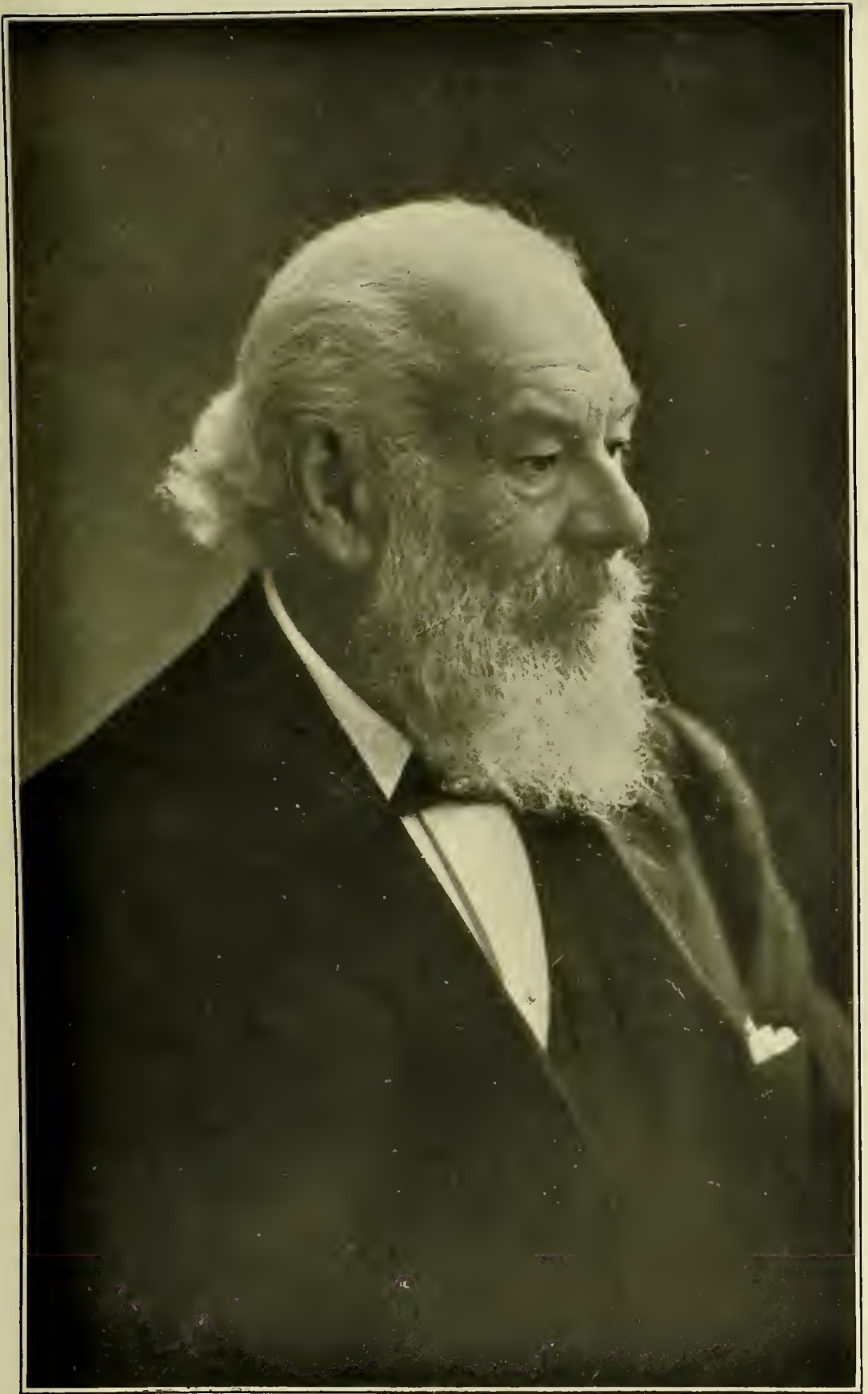
little refreshed. I have noticed this specially in the case of professional men who are keen sportsmen. Many of them take no *regular* exercise, and then spend their autumn holidays on the mountains and moorland. Their muscles are flabby and their lungs and heart have also suffered from lack of regular exercise. Suddenly these organs are called upon to meet excessive strains, such as are entailed in eight or nine hours' daily tramping the heather carrying a gun and ammunition. Their pluck and enthusiasm carry them through, but they return to the shooting lodge each evening limp and weary, while for many days in succession heart and lungs are called upon to bear these excessive strains. They may benefit from the outing, or they may not. It all depends on how nearly they have approached the limits of their endurance. At the best the effect is temporary. It gives the subject a physical tonic, the benefit of which rapidly disappears after he returns to his ordinary sedentary occupations.

On the other hand, the man who takes regular exercise and always keeps fit, not only enjoys his annual holidays more keenly, but derives a more lasting benefit from them. They become a sort of annual renovation.

I was at a dance recently, where the most energetic man in the room was a youngster of 80. He danced seventeen dances—one of them a supper extra, lasting about twenty minutes. I have known him intimately

since I was a boy, and at one period rented a shooting with him in the wildest part of County Wicklow, where a day in the heather meant incessant climbing and descending of steep mountains. At this period he was over 70 years of age. I have tramped the heather with him from 9 a.m. to 7 p.m., with a short interval for lunch, and have myself reached the shooting lodge completely fagged out. Dinner over, I was fain to rest my weary limbs on a sofa or armchair, but this grand old sportsman was built of sterner stuff. I have seen him waltz for two solid hours with my wife and another lady, taking them in turn, and when they were both too tired to continue, he would dance Irish jigs by himself. The first thing to greet my eye from the bathroom window each morning, when taking my matutinal tub at 7.30 a.m., was my worthy relative enjoying a constitutional to get an appetite for his breakfast. A photo of this grand old man, taken in his 80th year, will be found facing this page.

The secret of perpetual youth, as exemplified by this veteran in years but a mere boy in heart and spirits, is simple. Since his earliest youth he has slept with his windows open. His usual hour for retiring is 10 o'clock. He rises early, walks from eight to ten miles every day, and spends several weeks yearly shooting and fishing, or travelling. As regards eating, drinking, and smoking, he practices moderation. Whether the pure air afforded by the open-sided tent would produce



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Mr. T. T. Mecredy, *ætat* 80.

[To face page 80.]

better results I cannot say, but I fancy it would. At any rate, it has done so in my own case, but I did not start life with anything like so good a constitution.

The preparation of the athlete for severe competitive contests affords useful *data*. The object to be attained, whether for athletic feats or to fit one to run the race of life successfully, can be well summed up in the words of the Latin author—*mens sana in corpore sano*. The groundwork is the same in each. It is essential that the subject should be healthy in mind and body, though a much higher standard of physical fitness is required in the sporting arena than to enable the average man to get the best possible results out of his life. The underlying principles, however, are the same, and therefore I will endeavour to draw a moral from my lengthy experience of actual training.

The first object to be attained is perfect health, without which it is useless and dangerous to embark on the severer ordeal of strict training.

The essentials I have already set forth on page 13. I have also dealt fully with the necessity for fresh air and plenty of it, and have explained the reasons. The use of oxygen for athletes, however, affords an additional argument to prove the extraordinary effects of pure air. It has been found that the inhaling of oxygen from specially filled cylinders for a few minutes before a race or other form of physical exertion has an appreciable effect. Not only is the athlete able to

accomplish a better performance, but he feels the effect of the contest less than if he had not been so primed. He has stored up in his system a supply to draw upon when the pinch comes.

The moral is obvious. If the athlete who, as part of his training, gets as much fresh air into his lungs as possible, is able to increase his vitality and physical powers by using a dose of oxygen, how much more will the average man who lives a sedentary life and sleeps in vitiated air, improve his general health by following the athlete's example and indulging in regular exercise, and, by breathing as much pure air as possible both by day and night; the oxygen may come later to his assistance in his final struggle with the Angel of Death.

I think it only right to mention that Surg.-Capt. MacCabe is doubtful as to the beneficial effects of oxygen artificially applied in the case of the thoroughly trained athlete. Writing to me on the subject he says:—"I agree it might do good to the untrained. It certainly does good in pneumonia, when the greater part of the lung is not in action; but in health stick to Nature's proportions, *but have them pure!*"

The regularity of the daily exercise is of great importance. It is essential that muscles, lungs, and heart should be regularly exercised if they are to function properly, and it is advisable in this initial preparation—I am still using the trained athlete as the

type of perfect development—that the exercise should be varied so that every member is developed, and the body becomes lissome and symmetrical. Hence it is essential that the man who turns his attention to cycle racing (in which, I may say, most of my experience was gained) should not confine his preparation to cycling, and the same applies to any other athletic pursuit. A short spell of Sandow exercise after the morning tub is to be recommended, and breakfast should be followed by a walk or cycle ride.

Just as important is the regular exercise of the lungs, for if they are not well developed and functioning properly, an excessive strain is put on the heart, due to the necessity for circulating the blood faster so as to get rid of the abnormal production of carbonic acid gas. The only indication of this state of affairs is a sensation of distressing breathlessness and irregular breathing. Hence, through neglect of the lungs the heart may be seriously injured.

Both in the case of the athlete and the average man the breathing should be regular and deep, so that every portion of the lungs may be exercised. Failing this, part of the lungs is rarely or ever called into action, with the double result that it is not available in an emergency and is apt to become diseased. One should learn, therefore, to breathe through the nose rather than the mouth. In the former case the breathing is likely to be deep, regular, and slow; in the latter, short

and fast—in other words, in more or less panting gasps. The athlete who breathes nearly altogether through the mouth becomes suffocated by the excess of carbonic acid gas when exerting himself to the utmost—that is, he becomes “baked.” The strain on the heart is then excessive, and he must ease up temporarily to restore the balance or he will completely collapse.

From another point of view nose breathing is of vital importance. The nose is a microbe trap, and is provided with mucin to prevent these dangerous micro-organisms from getting into the blood. There is no such provision of Nature in the mouth, and hence mouth-breathers are more apt to contract disease than nose-breathers. The blood vessels in the nose also warm the air on its way to the lungs, whereas through the mouth it reaches this vital organ in a comparatively cold condition, which is not advisable, especially when the body is over-heated. Mouth-breathing also develops thirst.

In my early cycling days I made a practice of keeping a small, smooth pebble in my mouth when cycling, as I experienced beneficial results therefrom, though without knowing the reason. The effect is three-fold. It teaches one to keep the mouth closed, it promotes the regular flow of saliva, and it prevents the mouth becoming dried up from inflowing air. As a result, though in my 49th year, I can still sprint the steepest

hill without losing my wind, and I can ride all day without liquid refreshment except at meal times. In the twelve hours' Time Trial to which I have already alluded my partner found it almost impossible to take nourishment, except in the form of soda and milk, whereas I experienced no difficulty in eating dry toast, and had no craving for liquid refreshment. In fact, I took none, except in the form of grapes, bananas, and the warm milk which was mixed with the crumbled bread and porridge which I partook of at regular intervals.

Lung exercise is very simple. After rising in the morning one should stand at an open window and five or six times in succession should empty the lungs and then draw in as much air as they will hold. This clears the lungs of foul air, and fully exercises those parts which have lain quiescent during the night. The same process should be repeated several times during the day, more especially when leaving any building for the open air. The exhaling and inhaling should preferably be done through the nose. Some authorities recommend exhaling by the right nostril with the finger closing the left, and then inhaling by the left. After a few turns the exhaling should be effected through the left nostril and the inhaling through the right.

Even the busiest man would find it pay—in every sense of the word—either to walk or ride at least part of the way to his office, and eventually it would not

prove an actual loss of time, for the maintenance of efficiency is necessary as regards every mechanism, whether human or otherwise, to prevent a breakdown. After office hours another walk or ride should follow, but it ought to be of a brisker nature, such as to promote perspiration, and should finish at one's home, where the treatment of the skin should be attended to, as hereafter described. Saturday afternoon should be devoted to more sustained efforts—a mountain climb, a long cycle ride, or a game of golf.

Having got into robust health, the would-be athlete will then specialise in the particular branch of athletics which he favours, whilst the average man—with whose interests I am principally concerned—will continue in the course marked out, with this difference, however, that Saturday afternoons will be devoted to his special hobby or hobbies, whether golf, cycling, fishing, or such-like, always bearing in mind that variety is desirable. For example, the fisherman or the golfer will find it beneficial to ride to the scene of operations.

Personally, I believe that cycling is the finest form of exercise and recreation in existence, and yet if I had my life to live over again, I would certainly take up some other pastime as well, so as to symmetrically develop the various parts of my body. I made the mistake of devoting myself almost exclusively to vigorous and constant cycling, and now at the age of 49 I find myself with good chest development, sound



A Week-end Camp beside the Sea.

Showing four of the Holding gypsy tents for cyclists.



The Joys of Cycling.

Crossing Ballaghabeama Pass in Co. Kerry.

[To face page 86.]

in heart and lungs, able to spurt up steep hills without losing my breath, and to ride long distances without feeling exhaustion, but—and here we come to the fly in the amber—my thigh muscles are so enormously developed that I walk and run stiffly, although, once seated on the bicycle, they work with the freedom and strength of youth. In fact, I am muscle-bound for all efforts but cycling.

But that is not all. Cycling does not sufficiently exercise the back and arms; hence my back is comparatively weak and gets tired after long walks, or much standing, and the muscular development of my arms compares very badly with that of my legs. I would, therefore, urge my readers to vary their physical exercises. I do not play golf, as I cannot spare the time, but, from what I have seen of it, I think it is a most excellent form of recreation for those who desire to exercise every part of the body without indulging in too vigorous exertion, and to breathe long and deep draughts of the purest fresh air. Golf and cycling combined should prove ideal.

The care of the skin is probably the last consideration to enter the mind of the vast majority, even of those who realise the importance of health. Yet, as I have already pointed out, the pores of the skin serve as the natural outlets for the poisonous waste-products of the body. It is, therefore, vital to health—aye, even to life—that these pores should be kept open, for if

artificially closed, as for example, by painting the skin with enamel, death would probably follow in a few hours.

To ensure that these pores function properly the following conditions are essential—absolute cleanliness, a certain amount of massage, woollen clothing, pure air in large quantities, indulgence in some form of exercise causing perspiration, and the careful avoidance of chills or draughts when overheated.

The case of the athlete again affords interesting *data*. He takes his practice runs clad sufficiently warmly to prevent chills. When completed he dons a warm overcoat and immediately retires to the dressing-room, where his trainer dries off the perspiration with gentle but stimulating application of a rough towel, moving his hands in circles and upwards, so as to promote the flow of the blood towards the heart. Rough gloves are then used, and the trainer finishes off with hand massage, the whole operation lasting from twenty minutes to half an hour. The use of a little olive oil is especially beneficial in this last stage. The athlete then puts on sufficiently warm clothing to protect him from chills, and wends his way homewards.

The rubbing and massage not only render the muscles lissome, but encourage the breathing of the pores of the skin and the outflow of perspiration until the poisonous waste products have been eliminated.

Massage is now recognised as most valuable treat-

ment in the case of many diseases, and is of universal importance from a health point of view. Dr. J. Stenson Hooker, writing on this subject, says:—

Its efficacy in numerous diseases is undoubted. It is a powerful force for the changing of tissue by exciting action and reaction of the circulatory and nervous systems; it will certainly accomplish much more than ever medicine alone could; but, although used so extensively, there is still further room for its employment. I feel confident that systematically employed it would be of great benefit in many diseases in which it is as yet never prescribed, such as diabetes, Hodgkin's disease, asthma, anaemia, heart complaints, etc. For all those who lead a sedentary life, and cannot obtain walking or other outdoor exercise, massage would be of great help, while for children it is an inestimable good. All those who have the care of children should receive some instruction in the art.

Again, Dr. Stretch Dowse, referring to children, says:—

Every nurse should understand massage, and every child's limbs should be manipulated for a quarter of an hour night and morning with unswerving punctuality. If this were done we should become a finer, a harder, a more enduring and a more intellectual race than we are at present, and we should hear much less of nervous diseases in the after stages of our existence.

But this is nothing new. In B.C. 380, Hippocrates wrote:—

The physician must be experienced in many things, but assuredly also in rubbing. For rubbing can bind a joint that is too loose, and loosen a joint that is too rigid. And again, rubbing can bind and loosen, can make flesh and cause parts to waste. Hard rubbing binds; soft rubbing loosens; much rubbing causes the parts to waste; moderate rubbing makes them grow.

My readers have doubtless often heard of an athlete being "baked" or "having a bad time," and, in some cases, of remarkable recoveries from this "bad time."

It has happened to me frequently. I have, in racing parlance, been "dead to the world"—it is a direful sensation—and have "come to" and finished, figuratively speaking, like a lion.

This condition is due simply to the production of so much of the self-poisons, already referred to, in the system, that the various methods of getting rid of these waste products fail to accomplish the task, and an accumulation takes place which at once affects the physical powers. The formation of carbonic acid increases while the input of oxygen decreases, and recovery cannot take place until a slackening off in one's efforts gives the system a chance of recovery, so that the balance is restored and the waste products are ejected as quickly as they are produced. Sometimes the period of recovery is short, and sometimes long—so long that the person affected is hopelessly left behind in the competition. When recovery does take place, however, and the system is swept clean of these products, the change is extraordinary. One feels fitter and fiercer than at the beginning of the contest.

In the year 1893 I had a typical example of this in my own person, and in that of a companion. It was in the tandem twelve hours' contest already referred to, for which I had no initial preparation in the way of distance work. At the end of the first forty miles I became distinctly "groggy." My breath came painfully; my legs grew heavy as lead. Mental worry—

which always affects the physical powers—complicated the situation and undoubtedly assisted to produce it. Our pacemaker's bicycle punctured, and not knowing the road, we lost the way. Had I slackened off for a few miles I would undoubtedly have recovered quickly. At that period, however, I was not aware of the direct causes of such a physical collapse, and consequently strained every nerve to keep up to our schedule time, with the result that my "bad time" lasted for nearly forty minutes. I suppose at last I must have unconsciously given up hope and taken it easy. I can well remember my sensations. I felt as if I would give anything to throw myself off the machine and lie on the roadside. The feeling was uppermost that long-distance contests were a "mug's game," and I vaguely wondered what induced me to leave my home and expose myself to such bodily torture. Be that as it may, I suddenly began to recover, and in a wonderfully short space of time felt the glorious sensation of absolute fitness, and a capacity for any amount of work.

At 120 miles my companion got *his* "bad time." There happened to be foot-rests on the tandem (which was a full roadster with 2 in. tyres), and a happy inspiration induced me to insist on my companion putting his feet up on the foot-rests. At this period I had a super-abundance of energy, and, *solus*, was able to pedal the machine at almost as fast a speed as

we had been averaging. Result—my companion recovered in five minutes. He got a complete rest at the critical moment, the balance of input and output was restored, and from that to the end of the 204½ miles we felt as if nothing could stop us; in fact, if the pacemakers had been equal to the task, we could have covered the last fifty miles at a greater speed than we could have attained to in a fifty mile race. Our systems had been completely cleared.

The weight of the waste products got rid of during that twelve hours' ride will be realised when I mention that at the finish I was almost twelve pounds lighter than when I started, and my companion, who had not got so much superfluous tissue, owing to having trained specially, lost about eight pounds. We weighed ourselves both before and after the event.

The moral for ordinary individuals who only require to keep in good health is not to overdo it, either mentally or physically. If they find they are becoming "baked"—or in other words, getting into bad health—they should moderate the severity of their outdoor pursuits, or take a rest from business cares, as the case may be. Exercise, however, should never be wholly discontinued, unless one becomes really ill and the family doctor prescribes complete rest. In any event, the fresh air treatment should not be abandoned. It is the very foundation of life and health.

But to return to the athlete. A man should make

quite sure that his heart is sound, and that lungs and limbs are in good order before he embarks on violent physical exertion of any kind. If he is unsound a breakdown is likely to follow, resulting in early death or physical decrepitude, whereas a programme of moderate exercise and fresh air would tend to build up a good constitution, as it did in my case.

The same applies, though in a lesser degree, to the average man who, without any desire to go in for competitive athletics, craves for manly, out-of-door sports. He should know himself. If he is physically sound the most vigorous exercise in the open air will prove beneficial. If he has a weak spot, violent exercise and concentrated strain may find it out. It is essential, therefore, to exercise due caution and regulate the severity of one's physical recreations to suit one's constitution, especially if these physical recreations are not of regular occurrence, but only on the occasion of definite holidays, as in the case of the sedentary man who crystallizes his holidays into a fortnight or three week's shooting in the autumn, and endeavours to keep pace with friends who are always fit. It not infrequently happens that in such a case the holiday proves absolutely prejudicial to his health.

Severe physical exercise in a vitiated atmosphere is nearly always injurious. Games like Badminton should, for this reason, be avoided. The exercise tends to exaggerate the malign influence of the bad air.

It should always be borne in mind that the abnormal development of any portion of the human body entails certain responsibilities. Take the case of the athlete. His training and the subsequent contests in which he takes part tend to develop heart and lungs abnormally. The same applies even to the stomach, which has to adapt itself to the large, healthy appetite which necessarily follows regular exercise of a vigorous and exacting nature. During the few years of active competition all goes well. Our friend is the picture of health and strength. His eye is bright, his skin clear and fresh, and his muscles stand out in strange lumps and ridges. He exults in his strength and knows that feeling of perfect fitness which gives exquisite joy. He truly lives and enjoys every moment of life—a healthy, happy animal, delighting to the full in natural pleasures.

A few years pass, and in the usual course of events business, or other responsibilities, necessitates the giving up of the pastime in which he excelled. Probably his life becomes a sedentary one, and he has no time for regular exercise. The years of careful training, fresh air, moderation in all things, and self-control, have given him a splendid reserve of vitality which he calls upon to the full in the conduct of his business or profession. Forgetting that by his past activity he has abnormally developed both heart and lungs, he takes no steps to give them such exercise as their

capacity demands. As a result they become unhealthy, and, in many cases, diseased. Many an old athlete sinks into an early grave from this cause, or, at middle age, becomes a comparative invalid.

The stomach suffers in another direction. The athlete has developed a big, healthy appetite, the regular and severe physical exertion demanding increased nourishment. The stomach has developed to meet the demand upon it, and consequently the athlete, when he suddenly drops his pastime, continues, from force of habit, to fill the space which has adapted itself to the call made upon it. Circumstances have changed, however. Such a large quantity of "fuel" is no longer required. There is not the same consumption of tissue to be replaced. The system cannot assimilate so much, and consequently indigestion and subsequent bad health result.

Hence, if the retiring athlete desires to preserve his health he must not suddenly relinquish vigorous exercise. He should reduce it gradually, so as to accustom heart, lungs, and stomach to less work than they have been previously called upon to do. He must never wholly cease taking exercise, or the vital organs will degenerate and suffer.

On the other hand, he must bear in mind that a man is as old as his blood vessels. As his years increase he must not be tempted to overstrain these all-important blood vessels, no matter how fit he may feel,

for naturally they are not in such a condition to stand severe strains as when he was young. One act of indiscretion may ruin the remainder of his life.

As regards food, he must reduce the quantity consumed—more especially as regards meat—even if at first he has a distinct craving to fill the enlarged stomach.

The converse applies to the ordinary man who takes no exercise except on an occasional holiday. Heart, lungs, and muscles are not in a condition to stand prolonged physical exertion, and thus holidays of this nature are often injurious, owing to the holiday-maker overdoing it, especially in the case of ladies, whose pluck and spirit of emulation lead them to attempt feats beyond their physical strength. Exercise should be taken in small doses frequently, rather than in big doses occasionally.

Looking at the matter of exercise and recreation from a general standpoint, I think that, on the whole, moderate physical exercise lays a better foundation for a healthy life than severe competitions which entail months of training. Certainly less risk is run. Personally, however, I have nothing to complain of. I have gone in for vigorous exercise since I was a boy, and was in strict training for cycle racing for twelve consecutive years, and prior to that played football and indulged in racing on the flat. I feel, however, that I owe my continued health to the fact that I still take constant

exercise, quite sufficient to keep heart and lungs in thorough working order. I would not advise any young man to go in for racing unless prepared to follow my example in this particular.

The importance of exercise is well exemplified in the following excerpt from the works of Dr. Oscar Jennings:—

Many of the diseases to which we are subject result from want of exercise. This is followed by inadequate organic combustion, often associated with an excessive employment of combustible materials. I do not propose to enter into the theory of the origin of the diseases alluded to—rheumatism, gout, obesity, and the associated affections, asthma and diabetes. In these affections there is always found a retention of the injurious products resulting from imperfect oxidation of the food substances, a pathological condition, frequently capable of remedy by regimen and suitable exercise. In gout there is an excess of urates and uric acid. In rheumatism there is also an excess of acid, whether uric or lactic, and it may be, as Maclagan has supposed, the intervention of micro-organism.

CHAPTER VIII

MENTAL INFLUENCES

"The effect of exercise upon the faculties of the mind is of much importance. It keeps the understanding clear, the imagination untroubled, and the spirits in a fit state for the proper and most vigorous exertion of our intellectual powers."—*Dr. Graham.*

FEW people realise the extraordinary influence which mind has on matter, and matter on mind. It is a reflex action. Mental worry has always an immediate effect on the physical powers, and consequently a hard-worked business man who worries is burning the candle at both ends, and if this continues he may become a physical or mental wreck. On the other hand, healthy physical exertion of an absorbing nature makes a man forget his troubles, and rests and benefits the mental faculties. Apart from this, the exercise which improves one's health also strengthens the mind. In fact, health of body and health of mind generally go hand in hand.

My racing experiences afforded me many examples of the effect of mind over matter. The most notable example occurred in 1891. I was captaining a team of four members of the Irish Champion Cycling Club in a match against the famous Polytechnic Club of London. Based on previous performances, our

chances of success were rosy, and personally, in my then form, I was a hot favourite for first place. Two hours before the contest, however, I got a wire informing me that a bill for a substantial amount which I had backed for a friend had been dishonoured. I was not possessed of a superabundance of this world's goods, and the news upset me somewhat; but I have never worried much over such matters, and had no idea that it would affect my form. The eight riders, four from each club, were all started in one heat, and position was everything. At the bell our three best men were grandly placed. Arthur du Cros held the lead with the inside position; I rode overlapping him on the outside, and Harvey du Cros, junior, was on Arthur's back wheel. It looked any odds on our winning, for to get in front the Poly men had to ride round us. If I could hold my position the match was ours.

I failed lamentably, and actually finished seventh, although but for that telegram I was morally certain of either first or second place, and a few days later beat the men who finished in front of me.

Yet another example occurred in 1890, in which year I won the four National Cyclists' Union championships. There was a rider named Parsons whom I had little difficulty in beating in other events. Three Irishmen and one Saxon qualified for the final heat of the mile—Arthur du Cros, Harvey du Cros, junior, Parsons, and

myself. Now, just before the start I discovered that the front tyre of my bicycle had developed a big boil, which I felt sure would burst during the race, and as I was keenly anxious to win, I was much perturbed. As we flew round Paddington track I could distinctly feel the bump each time that wretched boil came in contact with the hard surface, and my heart sank within me. Try as I would, Parsons got into the finishing straight first, but I made a supreme effort at the last moment, and we crossed the tape locked together amidst the tumultuous roars of the assembled multitude. I was quite sure I had been beaten by the breadth of a tyre, but the judge gave his verdict in my favour by two inches.

But for that boil I believe I should have won comfortably instead of having been extended to the very last inch.

One more example. At one stage of the Twelve Hours' Tandem Trial, to which I have already alluded, I got it into my head that my right pedal wanted oiling. There was no oil available, but shortly afterwards I had occasion to stop to imbibe refreshment in the shape of Bovril, and the sub-editor of the *Irish Cyclist*—Mr. T. W. Murphy, an old hand at the game, and up to every dodge—managed to get some of the "raw material" from the Bovril bottle into an oil can unknown to me, and with this, in my presence, he lubricated the pedal! This put my mind completely at

rest. The pedal, I thought, had been lubricated: *ergo*, it was working freely, and I ceased to complain.

Ordinary pleasure cycling has afforded me many examples. I have always found tandem riding more enjoyable and beneficial than riding alone. The juxtaposition of a congenial companion has a stimulating effect. Conversation keeps the mind pleasantly occupied, and I have invariably found that the more interesting my companion is the less do I feel the physical exertion of propelling the machine.

I constantly ride between my home near Bray and my office in Dublin, a distance of thirteen miles each way. If by good luck I overtake an acquaintance on the road, I find that his companionship makes the journey seem much shorter, and I reach my destination fresher than if I rode alone.

I mention these incidents to emphasise my point, that to get the fullest benefit from a recreative exercise it must be of such a nature that the mind is kept pleasantly occupied throughout.

The business man who takes a solitary constitutional is apt to carry his business cares with him, and consequently he does not secure a mental rest, and his exercise is only partially effective from a health point of view. If he cannot get a congenial companion to accompany him, he should adopt some hobby which will engross his attention. It is of little consequence what it is, provided it affords exercise, fresh air, and

mental relaxation. Milton was not far wrong when he wrote the lines:—

“ The mind is its own place and in itself
Can make a heaven of hell, a hell of heaven.”

The man who constantly worries about petty business and other troubles should bear this in mind. He should cultivate a philosophic spirit, and concentrate his energies on leaving dull care behind his locked office door. It is an even more healthy recipe than early rising for making a man “ happy, wealthy and wise ” —a combination which surely everyone desires.

I am particularly fortunate in being able to banish dull care from my mind, and when on my bicycle, or indulging in any other form of recreation, can absolutely forget and ignore business worries. Once, however, I found myself in a very serious position in connection with a lawsuit, through no fault of my own, but which appeared to be taking a course that would implicate me. For three days I suffered great mental distress, and in that period lost nearly a stone in weight. Towards the close of the case I was completely exonerated, and the effect of my previous anxiety vanished as rapidly as a disagreeable nightmare. The incident enabled me to understand how it is that so many men are hurried into their graves by mental trouble, and to realize the vital importance of mental rest.



Veterans.



"Dolce far niente."

[To face page 102.

Variety is truly said to be the spice of life, but some spices are not wholesome, and in selecting our variety entertainments we should exercise a wise discretion.

I have shown that fresh air and exercise are essential, but it is just as important that our recreations should develop our mental faculties, especially our powers of observation, and give us a further knowledge of our fellow human beings and a clearer insight into the works of Nature, animate or inanimate.

We should try to get into touch with peasant life, to develop a love for beautiful scenery, to study the ways and customs of wild birds and animals generally; to learn to derive pleasure and draw inspiration from the sound of running water, the murmur and rustle of the wind through the trees, and the roar of the storm, when—

“ Wind, that great old harper, strikes
His thunder harp of pines.”

Touring, whether in one's own country or in foreign lands, is the very best possible means of developing both mind and body, and even the week-ends can be used advantageously for less ambitious trips. Of all methods of progression for touring purposes, cycling is the most prolific. Motoring comes next, for although it does not afford much exercise as a rule, it supplies an enormous amount of air under pressure, strengthens the lungs, energizes the system, purifies the blood, and is a perfect cure for insomnia. In consumptive cases

it has been found very beneficial, and as a preventive should prove absolutely effective. I know of a case sent home from Davos as hopeless. He bought a motor car, and in four years drove 54,245 miles. He is now in wonderfully good health considering his condition when he took up the pastime. The outdoor life, in the shape of camping, puts the keystone to both forms of recreation. For the comparatively robust I should judge from experience that the cycle is the most effective, but for the delicate the motor car, though in this case some actual exercise should also be taken, such as walking or golf, the latter for preference, for it is a form of recreation which suits men and women of all ages; not only does it supply sufficient exertion to fully exercise arms, legs, chest, and back, but it keeps one in the open air for successive hours, and completely occupies the mind.

CHAPTER IX

VERSATILITY AND VARIETY

VERSATILITY in one's recreation, whether competitive or otherwise, is most important, for it ensures the development of every part of the body, and broadens the mind. The man who has only one hobby, who can talk of nothing else and scoffs at the recreations and amusements of his friends and neighbours, not only proves a nuisance to those with whom he comes in contact, but is apt to develop into a mono-maniac.

A typical case of versatility is Mr. C. B. Fry, the editor of *Fry's Magazine*. He seems to have excelled in almost every manly game, and is an authority on an enormous number of varied subjects, from motoring to diabolo. Mind and body have developed in harmony.

At the other extreme is the typical fisherman, who plies his one and only pastime alone, and can talk on no other subject.

A friend of mine once stopped a night at a certain fishing resort in the West of Ireland. He was the only outsider, and at dinner that evening fishing was the one topic. They told of the fish they had caught and the fish they had not caught; how they had played

them; the huge fellows they had lost; the flies they had used, and so on *ad nauseam*. Meanwhile my friend sat glum and silent, but with his gorge gradually rising, until, at about the fourth or fifth course, the fishermen began to get played out. Their "books of lies" had been completely exhausted. Taking advantage of a sudden pause in the conversation, my friend turned to an elderly gentleman who sat beside him, and remarked in the most suavely sarcastic voice: "I think, sir, you have not told us yet how you caught your little stickle-back!"

It was bordering on the rude, but it was well-deserved and had the desired effect.

Now, fishing is a splendid sport, golf an excellent pastime, and motoring, cycling, and even walking, have their advantages, but the man who makes a fetish of any one of them and ignores all others, is not spending his leisure time to the best advantage.

My ideal holiday would be a month's tour, combining motoring, cycling, camping, fishing, and golfing. I would select a long wheel-based motor car, and have clamps fixed at one side so as to carry a Raleigh tandem bicycle on the footboard. The impedimenta would include Holding tents, as illustrated in Chapter II. (the Gypsy pattern for two weighs under 3 lbs.), Jaeger blankets, cooking stove, fishing rod, and golf clubs. Under ordinary circumstances, I would personally drive the car in the forenoon, but in the

afternoon would relinquish the wheel to the chauffeur, and, mounting the bicycle with a companion, put in a thirty or forty miles ride, the motor car going ahead to select a camping site in some pleasant, sheltered dell, convenient to a cottage, and with a stream or lake close at hand for bathing in, and where, in many cases, one could fish.

The exhilaration caused by sleeping in the open supplies the tonic necessary for the full enjoyment of any holiday. The simple meals discussed as the party sit round the camp fire are enjoyed more keenly than the best *table d'hôte* dinner, and in nine cases out of ten one learns something from the unsophisticated peasant on whose land the tents are pitched. There is no worry about securing rooms, paying bills, or tipping obsequious servants, and if the weather is hopelessly wet, one can always relapse into the nearest hotel instead of camping.

When a particularly nice site has been hit on, it is a good plan to remain there for a few days, and spend the time motoring, cycling, fishing, or playing golf, and then, when the district has been thoroughly exploited, it is a simple matter to pack up and flit.

Even in the course of a day's journey one can, without inconvenience, seize an opportunity which may offer. I can recall a typical example, during a motoring trip to Connemara. About 12 a.m. we reached a place on Lough Mask called the Ferry, and as the day was

a promising one, we called a halt, hired a boat, and went a-fishing in the lake. Just about 1 o'clock I caught a fine 3 lb. pink-fleshed trout—one of the real fighting sort. We at once landed, kindled a huge fire of dry gorse sticks, and when they had burned down to a heap of cinders, I wrapped the trout in a newspaper, damped it well, and thrusting it into the heart of the glowing mass, covered it up with cinders. Inside twenty minutes it was retrieved—the paper still unburnt—unwrapped, and there lay the trout with the skin peeled off and cooked to a turn. The oil had soaked into the paper, and the flesh broke curdy and firm. No one who has not eaten a fresh fish cooked in this way can have any idea how delicious it tastes. A few sandwiches, a bit of cheese, and a cup of excellent coffee, completed a repast fit for a gourmand, even without the tonic influences of the bracing air.

At 5 p.m., when we had to reluctantly relinquish fishing, eleven fine trout had rewarded our combined efforts.

But a motor car is not essential for such an outing.

I have carried out hundreds of camping trips on the bicycle, carrying a tent capable of holding two, a ground sheet, Jaeger blanket, miniature cooking stove, and other impedimenta, the entire outfit not exceeding 16 lbs., including personal luggage, which amounted to about 3 lbs. per man. That is to say, each bicycle carried a load of 8 lbs.—a weight which does not



The Irish Labourer's Cottage—as it was.

[To face page 108.

appreciably increase the labour of propulsion. On these trips it is advisable to remain two or three days at each camping site, and one can then either explore the district on an unladen bicycle, fish, or tramp the mountains. Those desirous of camping should purchase the "Camper's Handbook," by T. H. Holding, of 7 Maddox Street, Regent Street, London, W. It is full of useful information, and gives the weights and cost of all the various appliances. If further information is desired, my experience is always at my readers' disposal. It extends back nearly a quarter of a century.

On one occasion thirty of us camped for a fortnight in a charming little sheltered glade in Glen Inagh, Connemara. It was a dream of pleasure renewed each day, from the moment that we listened entranced to the birds' first pæan of praise with which they greet the sun, until we broke up our camp fire concert and retired to rest.

Of all Nature's phases the study of bird life is perhaps the most interesting, and to the camper unique opportunities are afforded. My home tent, where I sleep out winter and summer, is the resort of various birds. Mr. Robin was the first to cultivate our acquaintance. That was in the late autumn, when we had been in possession of our canvas domicile for about three months. It was an innovation for humans to take to the woods in this fashion and encroach on the domains hitherto sacred to the feathered tribes. Mr.

Robin regarded it as distinctly suspicious, and although in the early mornings, after the birds had all joined in their hymn of praise, we sometimes saw him peering through the ever-open door of our canvas abode, it was not until the sting of winter approached that he ventured in to pick the crumbs scattered with the special object of enticing our feathered friends.

After this the intimacy between Mr. Robin and my wife grew apace. Myself he seemed to regard with a certain amount of suspicion, but when I had left the tent to perform my toilet in the house hard by, he would hop inside, seat himself on the back of a wicker arm-chair, and twitter little songs of gratitude and affection to my wife.

By-and-bye he grew quite domineering. If the crumbs were not there in good time he would protest loudly, flutter about the bed, and even hop on the pillow. In fact, he made it plain that in his opinion the tent had been placed there for his especial benefit, and he became quite patronising to the tomtits, black-caps, and chaffinches which, encouraged by his example, picked the crumbs at the entrance to the tent, but would not venture any farther.

One morning Mr. Robin made a discovery. At 8 a.m. a maid always brought my wife a cup of tea and a slice of bread and butter. Mr. Robin discovered that the bread had butter on it, and hereafter scorned the plebeian plain bread, and, in spite of my presence, flew

into the tent and pecked pieces of bread and butter out of my wife's hand. He even perched on the top of my knee, bent for the purpose, and gazed round with an air of happy proprietorship, while, on one occasion when the expected dainty did not materialise, he perched on my shoulder while I slept, and told my wife exactly what he thought of her.

His power of vision seemed marvellous. Balanced on the guy rope some 14 feet distant, he could unerringly tell if the small particle of bread were buttered. If it were plain he moved not, but the butter always fetched him.

In the early spring Mr. Robin brought a blushing young bride to introduce to the tent dwellers, but she was shy and coy, and would not enter, but stood outside on a tent peg with wings extended and mouth wide open. Mr. Robin, being nothing if not gallant, took the hint, and flying into the tent carried out several tit-bits in succession, which he pushed into Mrs. Robin's mouth before he sampled any himself.

This pretty little love-drama was played for several weeks, Mrs. Robin always putting on a ludicrously coy and timid demeanour, grotesquely reminding us of the airs and graces of some gushing young maiden of sweet seventeen.

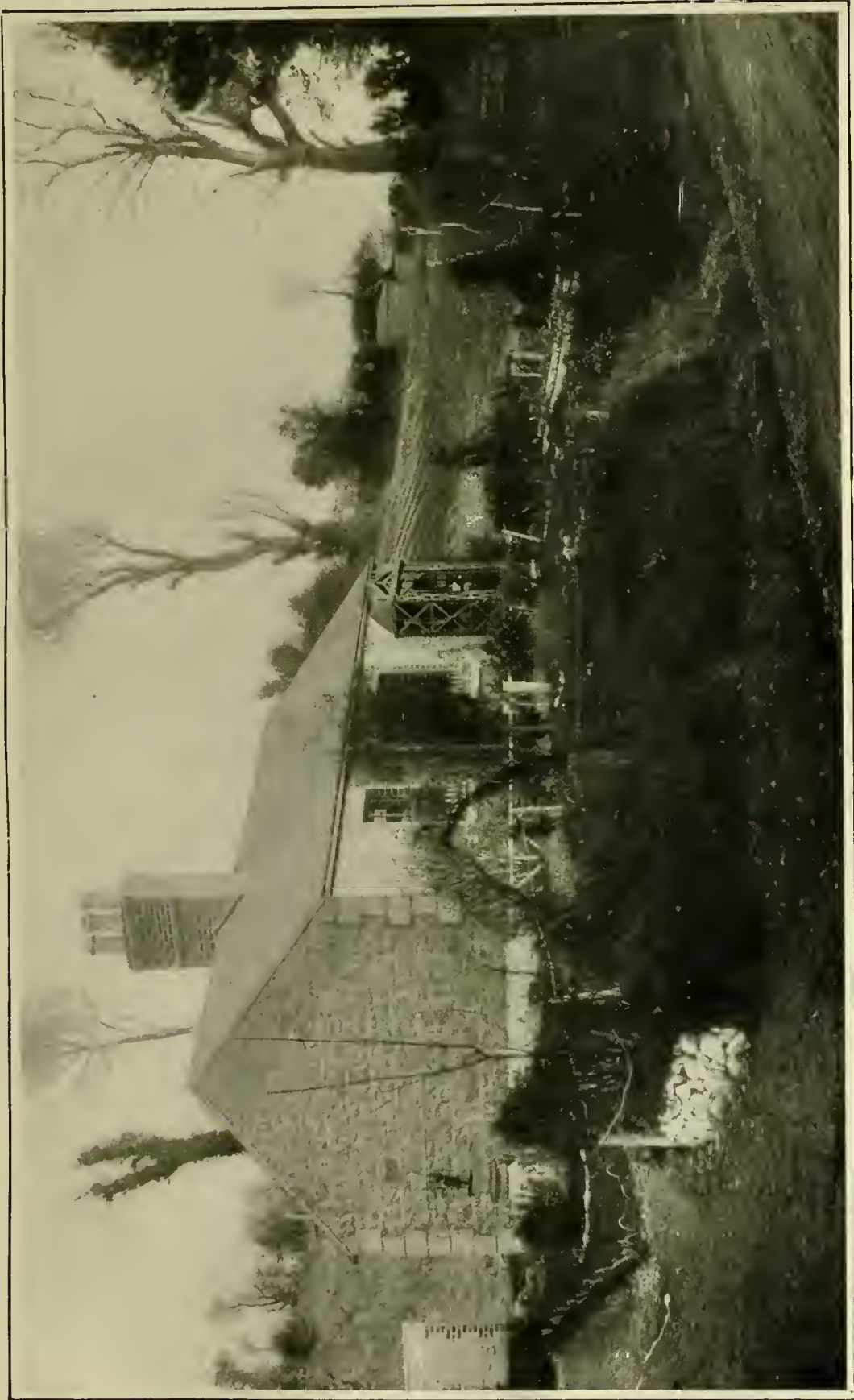
At last one morning Mr. Robin brought a larger piece of bread than usual and placed it hastily into his consort's beak. She dropped it indignantly with a jerk

of her head, as though reprimanding him for presuming to think that her little mouth could hold such a chunk. Three times he gave it to her and three times she rejected it, whereupon he turned away wrathfully and flew into the woods.

Mrs. Robin was thunderstruck. She gazed round in ludicrous amazement as if she could not believe her eyes, but, finding that he had really gone, she proceeded to console herself with the rejected piece of bread.

That was the beginning of the end. I fancy Mr. Robin got a curtain lecture that night which ended in a serious family quarrel. At all events, never again did he fetch bread for Mrs. Robin, although for some time she continued to take her stand, open-mouthed, on her usual tent-peg. She had to pick for herself off the floor of the tent, but she never became tame enough to feed out of our hands. The breach, too, seemed to gradually widen between her and her spouse, until at length he actually began to chase her away. After this I imagine he got a judicial separation.

As time went on Mr. Robin became more and more daring. He cultivated a taste for figs, and if we did not awake in reasonable time to attend to him he would stand on my chest and protest, or even flap his wings in my face. On several occasions he actually stood on the bridge of my nose—a method of awakening one which proved very effective. For over three years he



The Irish Labourer's Cottage—as it is.

[To face page 112.

was a constant visitor, and even in the day time would come at our call. Suddenly his visits ceased, and never again did his cheerful twitter awake us. We suspected the cat, and mourned for him as for an old and dear friend.

Mr. and Mrs. Robin were not our only visitors. There were a Mr. and Mrs. Chaffinch, who, though not so effusive with each other, seemed more faithful than the redbreasts. They were a staid and decorous couple, and not disposed to become in any sense familiar with their host and hostess. They came into the tent, but would not feed out of our hands.

Then there were numerous blue and black-capped tits that relied upon us for their breakfasts. One happy pair were particularly devoted to each other. Mrs. Blue Tit used to sit on the guy rope, while Mr. Blue Tit brought her a lump of bread. She would peck a little bit off, holding it in one claw, and then run, with a quick, sprightly motion typical of these birds, down the rope and hand it back to her mate. He in turn had a peck, and so they passed it politely from one to the other until all was consumed.

On one occasion my wife was awakened by a tug at her hair, and discovered Mrs. Blue Tit calmly pulling out hairs to line her nest. Once a young robin, who was on a voyage of discovery, actually got tangled up in her hair. Perhaps he mistook it for his nest.

Bull-finches, golden-crested wrens, and many other

varieties of the denizens of the neighbouring woods, come to peep in curiously and pick up any crumbs left outside the tent, but so far we have not succeeded in getting on terms of friendly intimacy with them.

This communion with Nature is one of the most delightful phases of tent life. Nature's awakening alone affords an intellectual treat which would compensate for much hardship, if such existed. As the first grey streaks of dawn lighten the eastern horizon (our tents face Bray Head and the sea) a faint twittering arises from the shrubs around us where the birds roost, just as though they were whispering greetings to each other while making their morning toilets. Then, as the rosy-fingered dawn illumines the clouds and gleams on the summit of Bray Head, a flood of melody bursts from a hundred tiny throats, and the air is instinct with life and music. It is their early pæan of praise to greet the sun's uprising. Its volume and range, its harmony and sympathy, form a combination which fills the souls of Nature-lovers with delight. One realises the joy and abandon of mere living which must have inspired our forebears in the days when modern civilisation had not made our mode of life artificial, and closed our ears to the voice of Nature.

Camping trips into the heart of the country give unique opportunities for observing Nature in all her moods, and fill the store-house of the memory with a

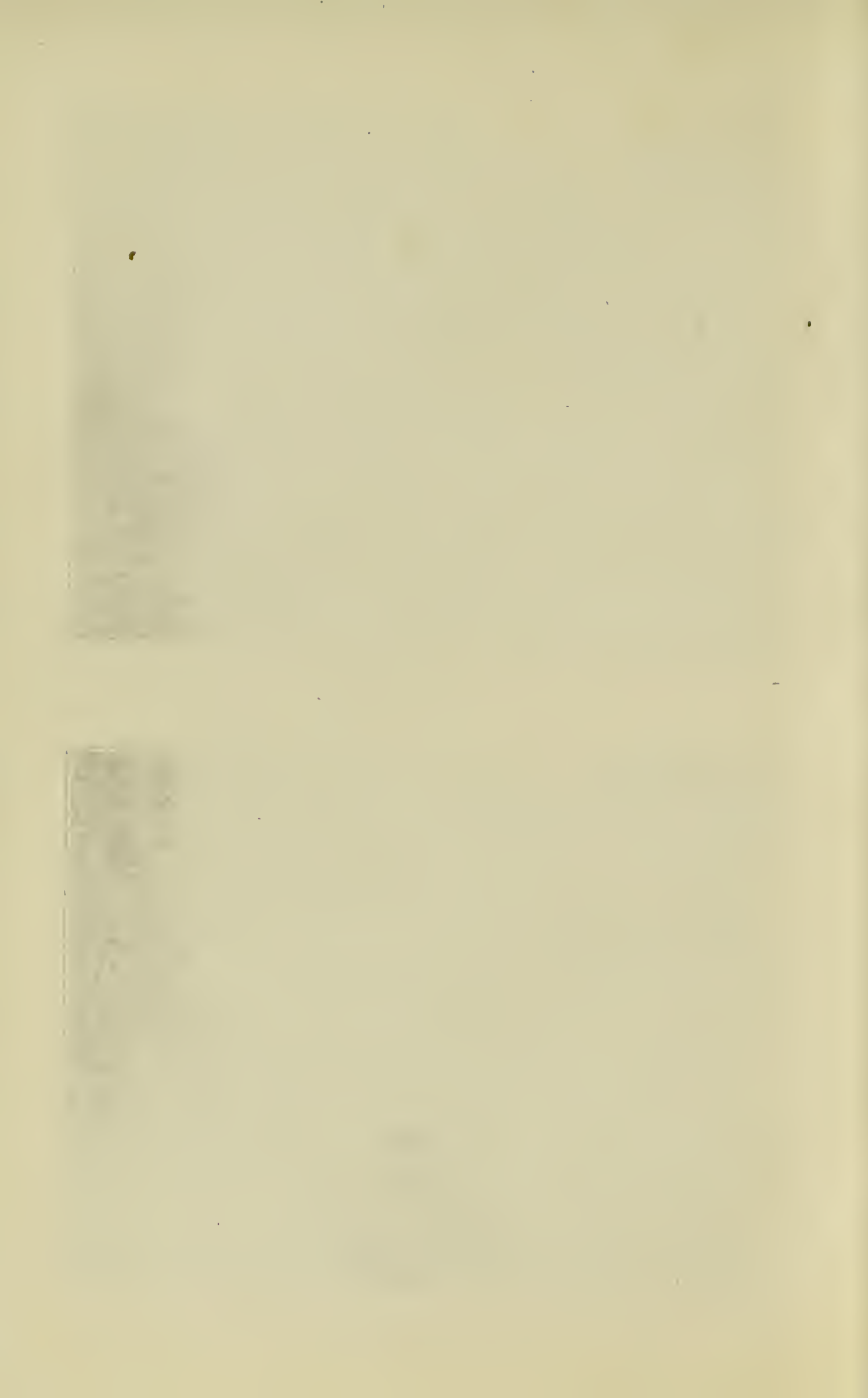


Alone with Nature.



In the Springtime.

[To face page 114



wealth of recollections which can always be called upon to cheer a dull hour. I can recall many a glorious scene which in retrospect thrills me with almost as much pleasure as when my eyes first dwelt on its beauties. One, an evening scene, never fades.

We were *en route* from Roundstone to our camp in Glen Inagh. The sun was sinking behind us as we set our faces campwards, and the view looking towards Roundstone was most wonderfully striking. The Lord of Day, in taking his departure, had invested Connemara with an unearthly charm, casting over her peaks and spaces an impalpable glow, rosy and diaphanous. Before us lay an undulating space crowded with huge boulders moulded into fantastic shapes, and their grey surfaces took a tinge of warm life from the reflected glory of the heavens. The little village of Roundstone in the middle distance, with its quaint church tower standing up squarely amidst the huddled roofs of the cottages, had a strangely foreign appearance, reminding me of Spain or Mexico.

Our way lay along the shores of Roundstone Bay, and the placid waters, lapping idly at the grey-bordered inlets and grassy knolls, were transformed from the prosaic order of every day into magical schemes of colour, palest pink, azure, and purple, melting into tender, alluring greens. Even the weeds that straggled to the water's edge from each protruding rock were

no longer mere weeds, but things of beauty, their dull purple and brown fringes tinged with gold.

The mountains were transfigured. The sunset glow brought into striking relief every detail of their slopes and intensified the shadowed gloom of their hollows. A filmy sheen of mist enwreathed their summits, delicate and ethereal, upon which the afterglow of pearl and pink rested long after the valley had sunk into shadow.

Turning inland for Ballynahinch, we came on a series of pictures upon which my inward vision centres whenever my thoughts rove Connemara way. Each turn of the road brought fresh charms into view; here a bog-land pool, reed-bordered, and changed, for the nonce, into a scrap of fallen, glowing sky; there a group of trees, lending a sharp, dark silhouette to enhance the general glory.

Ballynahinch was the final note struck in this symphony of colour—a minor note, for the glow was fading, and even as we sped along the narrow road towards Recess, the twilight crept solemnly up from the shade of the valleys and pressed back the Twelve Bens into grey, misty remoteness. And, lo! the day was done.

Another striking scene which I witnessed—also in Connemara—was in the early morning, after a day and a night of tempestuous winds and torrential rain. Our camp was astir early, and for this we thanked our special gods, for the sun had suddenly burst through



Cloud Effects at Killarney.

Taken from the grounds of the Royal Victoria Hotel.

[To face page 116.

the dense rain-clouds which, for thirty-six hours, had swallowed up the landscape. Scattered and broken, they reeled in shattered masses across the bare sides of the mountains and rolled and eddied down the glens, at one moment sweeping along the surface of the ground and anon swirling upwards and blotting out with their snowy whiteness whole mountains, only to sway apart the next moment and disclose leaping torrents which plunged madly down the almost precipitous clefts, where, under normal conditions, the naked rock showed. The whole panorama was so striking as never to be forgotten, and in the course of my peregrinations I had never seen such wonderful cloud effects before.

CHAPTER X

THE HUMAN INTEREST

THE human interest associated with touring generally, but more especially camping tours, is a liberal education in itself. I have cycled or motored considerably over 100,000 miles in Ireland alone. Scotland and Wales are also happy hunting grounds of mine, and I have some experience of Switzerland and the South of France. I have studied the characteristics of the people, especially in Ireland, where I make a point of lunching in their cottages, and encourage them to join me in a chat round my camp fire.

Innate courtesy and kindly hospitality are two of their outstanding characteristics. A hearty, if apologetic, welcome always greets the stranger. The good wife's ready apron is swept hastily over the best chairs for the guests, and if, as often happens, the homely kitchen is crowded, all but "herself," and perhaps her husband or eldest daughter, will quietly and mysteriously vanish. It is not good manners to intrude when the "quality" are being entertained.

I remember on one occasion I had left an English friend of mine, the Rev. A. B. Whatton, opposite a little



Our Hostess.

[To face page 118.]

rose-covered cottage where an old woman resided, apparently alone. A few friendly words of greeting passed, and a little later the old woman emerged again and asked him if he would like a cup of tea. It was just what he was longing for. In due course he was ushered into the little parlour kitchen, and excellent tea with hot buttered cakes placed before him. After having done full justice to the repast, he asked his hostess what he owed her, to which she replied with quiet dignity: "You were my guest, I invited you, sir." A more dignified way of putting the closure on all further discussion could not have been adopted.

The scene shifts to a wild moorland road on the borders of Co. Kerry. We were on a motor-cum-camping tour, and as it was lunch hour we stopped at a cottage in the door of which stood a genial-faced old woman, and craved shelter to eat our lunch. We were received with open arms, and our hostess supplemented our own provisions with fresh milk, butter, and home-made bread. When leaving we asked what we owed, to which the old dame replied that she was very proud to have us. Further pressure met with a dignified and emphatic refusal which left no room for argument. "My humble home," our hostess assured us, "is at your disposal; there are beggars on the road, give the money to them."

Another luncheon stop was made at a poor little cottage wherein dwelt a married couple with seven

children. Hearing a baby cry, I asked to see it, explaining that I was interested in babies as I had one at home. The infant was produced, the mother asking proudly: "An' is yours as big as that, sir?" to which I replied indiscreetly: "I think it is a little bigger." Tossing her head, the mother made answer: "So well it might be; that's only half of our's, the other half's with God. We had twins."

On another occasion I took out a wild fisherman, who lived on a remote Kerry island, for a drive in my car. He waxed very indignant with the Kerry cows which obstructed our way. "Dhrive over thim, yer honour—dhrive over the damn bastes!" he yelled. "Have you no cattle of your own?" I asked him. "I have wan," was the reply, and then, after a reflective pause, "an' begorra, I would not grudge her ayther!"

The Irish beggar, too, has a strong fund of humour. My wife was asked by one of this fraternity for a few pence. "I have nothing for you, my good woman," she replied in severe tones, to which came like a flash the response: "Thank God it's not anything worse!"

In a district where there was much distress, and Government relief had been granted, an old woman assured me: "If it was not for the famine, sir, we'd all be starving."

I was cycling through County Wicklow one dreary day when I overtook two poor looking girls wearily



Breakfast in Glen Inagh, Connemara.

[To face page 120.

staggering under the weight of baskets full of moss and ferns which they evidently hoped to sell in Dublin. As I passed I slowed up and dropped a few coppers in the nearest basket. Quick as lightning came the response, which was in the shape of a blessing and aphorism in one: "God lave you your health, sir, and speed you on your way." The greatest literary genius could not have improved on this vote of thanks if he had taken a week to think over it. It will be observed that she did not say "God *grant* you health"—that would have suggested that I did not possess it! And then—"speed you on your way" was singularly appropriate; it might either refer to worldly prosperity, or to my progress up the mountain pass which I was laboriously negotiating on a bicycle.

In Connemara I asked a benevolent old peasant: "How far is it to Renvyle?" "You're half way," was the reply. "From where?" "From here."

I got nearly as ambiguous a response in the streets of Belfast. I asked a man the way to the Northern Motor Company's garage. "Do you see that man," he said, as he pointed to a substantial looking citizen crossing the street. I replied that I did. "Well," he said, "that's Mr. Hanna, the coachbuilder, and he lives next door to the motor shop."

I had no time to shadow Mr. Hanna for the rest of the afternoon, so sought out a policeman.

On another occasion I got a Dublin street gamin to

take charge of my car while I went into a shop. I was delayed some time, and when recompensing the youth found that the only change I had was two pennies. Holding them in the palm of his extended hand, he remarked reflectively: "Now, I suppose you know the dates of them!"

Irish hotel waiters, male and female, are an unfailing source of amusement. On one occasion a girl attendant was asked for poached eggs. She looked a bit nonplussed at first, but after a little hesitation said: "There are no poached eggs in the place, sir, but I think I could get you some poached salmon."

In the moonlighting times a priest is reported to have preached:—"It's whiskey makes you bate your wives; it's whiskey makes your homes desolate; it's whiskey makes you shoot at your landlords. and"—with emphasis as he thumped the pulpit—"it's whiskey makes you miss them."

The parish priest's humour is nearly always leavened with much worldly wisdom. On one occasion my partner, Mr. Percy, was attending a cycle race meeting at Ballymena, and, talking to a certain sporting priest, was criticising the authorities for permitting so many "bookies" on the course, and expressed the opinion that they should all be excluded. "They have their living to make as well as you," urged his reverence. "Ah," replied Percy, "you are just the sort of man who would suit me for a Father Confessor." "That

would be all right for you," was the rejoinder, " but it would be a mighty dirty job for me! "

Once when I offered a priest a cigar he inspected it critically, and asked doubtfully: " Is it a good one? " " Pretty fair," I replied. " Well, the reason I asked," he said, " was because the last cigar I smoked was given me by the Archbishop, and a damn bad one it was, too, and the worst of it was, I took five out of the box! "

Not less interesting are the sporting Royal Irish Constabulary. On the occasion of the holding of the Gordon-Bennett motor race in Ireland, in 1903, a friend of mine took up his stand just opposite a sharp-backed bridge in the village of Kill, to watch the cars of every kind streaming past on their way to Dublin. Two policemen were posted at the spot to prevent reckless driving, and he asked them what they were doing there. " Regulating the thrassic," was the ready response. A moment later one of the racing Mors cars came thundering by, and as it leaped into the air off the apex of the bridge, the two constables bent down eagerly to watch the jump. Just as the Mors reached the ground again with a mighty crash, one of them putting his hand to his mouth shouted ecstatically after it: " You're the best yet! "

They were measuring the jumps.

A friend of mine, Mr. Chas. Segrave, was once signalled to stop by a country policeman, and inquired

what was the matter. The policeman, producing his notebook, accused him of driving too fast. "Were you ever on a motor car?" inquired Mr. Segrave, and on getting a negative answer he persuaded the limb of the law to get on board. As the good car gathered speed, the policeman's face beamed with delight. Down went the accelerator pedal, and as the pace rose well into the forties, the R.I.C. man leaned toward the driver and bellowed in his ear: "Can she do any better, sir?" No summons resulted!

A motoring solicitor with no small opinion of himself unfortunately knocked down a woman in the outskirts of Dublin. A constable saw the accident, and proceeded to arrest the offender, who, putting on an air of great importance, warned the constable to be careful, for he was a solicitor, and knew the law. "You may be a damn good solicitor," was the reply, "but what you don't know about motoring would fill a cemetery."

One more story, this time about a hotel proprietor, Mr. Johnny O'Loghlen, J.P., of Cashel. It was on the cycling tour in Connemara, when my vampire friend insisted on taking samples of our blood. We had cycled in torrents of rain from Renvyle to Cashel, and as we were drenched through, and our luggage could not reach us for many hours, we removed our wet clothes, and with the aid of blankets and safety-pins improvised picturesque togas.

O'Loghlen was delighted. He had an English Major



An Original Dinner Costume.

[To face page 124.

and his wife in the house who had complained to him that they had never seen any real, wild Irish, and he suggested that we should come down to *table d'hôte* in this unconventional garb. Four of the party consented, the others resuming their ordinary garments, which had meantime been dried.

The result was startling. The Major's eyes nearly dropped out of his head when the four worthies depicted in the photo-engraving solemnly marched into the coffee room after we had all been seated, and dropped into their places. He had an extra bolt put on his bedroom door that night. O'Loghlen, with a bold disregard as to whether his guest fled the hotel or not so long as he provided a joke, told him weird tales of our wild doings. Next morning the local Resident Magistrate arrived, and the Major consulted him as to whether it was safe to remain. "As long as I am here they won't hurt you," was the reply of the R.M., who thoroughly appreciated the humour of the situation; and the Major remained, but in much mental perturbation during the four days we were in possession of the Zetland Arms Hotel.

I may appear to have strayed from the subject in retailing these experiences. I have done so, however, to emphasise my point that recreation should be combined with physical exercise, change of scene, harmless merriment, and genuine human interest in the virtues,

failings, and characteristics generally of the people of the country. In this way is the mind rested through being fully occupied by pleasing sights and amusing incidents. It is broadened by intercourse with fellow-mortals, no matter of what class. We learn to think of others, to study others, and to sift the chaff from the wheat. The proportion surprises us. We begin to realise that there is more good in the world than we thought, to institute self-searchings; to take more interest in our friends and neighbours, and dwell less on our own petty cares and troubles, to the benefit of both mind and body.

CHAPTER XI

FOOD

"Moderate quantities of food taken at moderate interval are more easily and completely digested by ordinary people than larger quantities at longer interval."—*Albert Broadbent, F.S.S., F.R.H.S.*

MODERATION combined with a wise selection is the keynote of perfect health and physical development, so far as food and liquid refreshment are concerned. The vast majority of people eat and drink too much, and this is accountable for a great deal of the illness to which mankind is subject. Over-indulgence is bad for the athletic well-developed individual, even although he is a believer in fresh air and exercise and practises what he preaches. No doubt his otherwise healthy life enables him to over-indulge his appetite with the minimum of injury, and consequently he does not realise the danger; but he would be better, and live longer, if he chose his food carefully, drank wisely, and drew the line at repletion.

Dealing with the subject, Dr. J. Stenson Hooker says:—

"The small—and pure—feeders are the winners in the race of life; they can hold out longer than the big and coarse eaters. They even find that their mentation is quickened; they are not so

receptive to infectious disease, and when it does attack them they recover more easily; they are altogether better physically. The effects, then, of the more refined feeding spoken of are very apparent; there is an all-round improvement—physically, morally, mentally, and spiritually.”

To the sedentary man, however, especially if he is constitutionally delicate, over-indulgence is suicidal. Eventually it must injure his health. The digestive organs, liver, kidneys, and blood all become affected, and he runs the risk of developing into a chronic dyspeptic, with a system so enervated that he is a ready victim of epidemics and complaints which might otherwise be avoided. He loses all interest in life. Even the gross and merely animal pleasure of gluttony fails him, and he sinks into the grave, beggared of health, happiness, and self-respect.

Again, I will take as my type the man “who striveth for the mastery,” and will base my remarks largely on my own personal experience, finally indicating wherein the athlete’s rules of living should be modified to suit the general public.

Briefly, the lessons I learned were these:—

That we should eat to live and not live to eat.

That every mouthful should be slowly and carefully masticated.

That the amount should be limited to the quantity necessary to get the best results.

That to exceed this limit creates an additional strain on the physical and mental energies.

That food difficult of digestion has the same effect.

That certain foods agree or disagree with different people. In fact, that "one man's meat is another man's poison."

That when engaging in severe physical exertion demanding more than the normal quantity of fuel, it is better to eat often and little, than seldom and much.

That for people who do not indulge in severe physical exertion three moderate meals per day are ample, and that these should be partaken of at regular fixed hours.

That tobacco and alcohol are poisonous.

That to maintain perfect health of body and mind all poisons are to be avoided as far as possible, whether those created by an accumulation of waste tissue or those directly introduced through the mouth.

That no severe physical exertion should be entered upon either with a full or empty stomach.

That when it becomes necessary to satisfy the pangs of hunger whilst one is in the act of undergoing physical exertion, meat should be avoided, and only easily digested food, eaten slowly and in small quantities, should be used.

That when exhausted from severe physical exertion, one should rest a little before eating, should select an easily digestible food, masticate it well, eat slowly, and stop before the craving has been fully satisfied.

That when exhausted from hunger the same precautions should be observed, though, of course, it is

not necessary to rest before eating unless the hunger has developed during physical exertion.

That even mental exertion should be avoided both immediately before and immediately after a meal.

That no full meal should be indulged in within three hours of retiring to rest.

The foregoing may seem a tall order, and difficult to carry out literally. It is essentially a question of common sense, however, always bearing in mind that the ideal aimed at is to produce a condition of perfect physical and mental health.

Selection.—The human system in many respects can be compared to the generating powers of a motor car. Both require fuel, and in both it is essential that the "mixture" should be correct if the best results are to be obtained, and that the quantity should be sufficient, and no more. In the motor engine failure in these respects results in waste products which the scavenging system is unable to wholly get rid of, and thus carbon deposits are formed on the piston head, which affect the power, and eventually result in pre-ignition.

Similarly, in the human engine the food should be selected for its productive qualities and not merely to please the taste and fill the stomach. If it is unwholesome, or taken in too great quantities, there will be a bad "mixture," giving little power, and which the digestive and excretory organs will be unable to fully

tackle, with the result that the system will become over-charged with waste products and one's energy and vitality will gradually fail

Thorough mastication, also, is of vital importance. Bolting one's food causes a severe strain on the digestive organs, and portion of it is never fully digested, thus poisoning the system without producing any good result. A light meal eaten slowly and deliberately is of more practical use than a heavy one eaten hastily. A moderate diet has been found to conduce to endurance.

"Food," Dr. Gordon Stables says, "should remain long enough in the mouth to receive and be mixed with a proper *quantum* of salivary juices. These help to turn the starch into sugar, and a part of this latter is actually received directly into the blood through the lining membrane—called mucous—of the mouth."

Under "selection" it is more with the quality of the food that I have to deal, but the question of quantity is also affected, for if the quality is not such as to give satisfactory results, one is tempted to make up for the deficiency by consuming a greater quantity, and so the trouble is only accentuated.

Not only should the food be easily digestible, but it should be so selected as to afford the necessary variety of nitrogenous and starchy matter, and vegetable salts.

Food may be divided into four great classes, as follows:—

(1) *Albuminoid or Nitrogenous Foods*.—Nitrogenous foods, such as the white of eggs, contain the protein compounds that produce flesh, and are essential to life. They are contained in meat, oatmeal, flour, peas, etc.

(2) *Carbo-hydrates*.—These contain carbon and hydrogen, and are principally found in the vegetable kingdom. For example, oatmeal, wheat flour, tapioca, barley, maize, rice, sago, ripe fruit, vegetables, etc. They provide heat, and in excessive quantities are fattening.

(3) *Fats*.—These maintain the natural heat, and are particularly important in cold climates.

(4) *Water and Salts*.—These are found in all foods. The principal salts are chloride of sodium and salts of lime, iron and potash. They are indispensable to digestion and to the building up of most of the tissues.

The following include all the constituents necessary to health:—

Class I.—Eggs.

Class II.—Oatmeal.

Class III.—Butter.

Class IV.—Water and salt.

Even in the case of wholesome, nutritious, and power-producing food the personal equation must be taken into consideration. I know of one case where

duck eggs cause indigestion or a species of poisoning, even if eaten in small quantities, as in puddings, and some people develop an unpleasant rash if they indulge in that essentially wholesome and muscle-producing food, porridge. Another friend of mine has found that fish which has been kept in ice produces severe poisoning symptoms, and in yet another case strawberries and cream cause indigestion. A still stranger case is that of a member of my own household who always gets a species of nettle rash if she eats parsnips.

It is all a matter of common sense, and should one find that any particular food produces indigestion or other unpleasant results, it should be for ever afterwards tabooed, and it is a distinct sign of a gluttonous disposition to continue eating any delicacy which has previously proved injurious.

I learned the lesson early. I had a special *penchant* for dressed crab, and although on several occasions I had found that it had caused a mild attack of indigestion, I was tempted to indulge in some, two days before a race meeting. It had a disastrous effect on my form, and I made a poor display. That was in 1885, and I have avoided dressed crab ever since. On the other hand, dressed lobster agrees with me splendidly, although most people find it indigestible.

Quantity.—Over-eating is even worse than faulty selection, and is responsible for many of the complaints from which people suffer. Not only do people err by

not selecting nutritious food, and consequently are influenced to make up by quantity for the lack of quality, but they are inclined to feed gluttonously when the food pleases their palate, and to stimulate an artificial appetite by the use of unwholesome sauces and condiments. Now, if the stomach is overloaded the digestive organs have a severe strain put upon them, and if, in addition, the food is of an indigestible nature, a complete breakdown often results. Once the digestive organs are seriously impaired, they often cannot be restored to their original efficiency, and too commonly the subject becomes a chronic dyspeptic, a nuisance both to himself and to his friends.

Nor is this all. If the digestive organs are taxed beyond their limits the waste products are generated faster than the excretory organs, including the skin, can get rid of them. The system is poisoned, the vitality lowered, the army of white corpuscles is demoralised, and the subject is left almost defenceless against the numberless microbes which cause disease.

This even applies to the man who takes a reasonable amount of exercise. A more or less healthy appetite results, which enables him to assimilate a reasonably large amount of wholesome food, and keeps his excretory organs in comparatively good working order. Hence he keeps in fairly good health, though he would be better if he ate less food. To the sedentary man, however, habitual over-eating means disease, failure

of his physical powers, mental sluggishness, and, too often, early death. There are few who have not experienced the sluggishness resulting from a very heavy dinner, often causing an intolerable desire for sleep. The powers seem temporarily numbed. Poor "Little Mary" is overwhelmed, and although struggling bravely against hopeless odds, is unable to relieve the system.

It must be borne in mind that the functioning of the digestive organs makes a very heavy call on the system, just as in the case of severe physical and mental exertion. One cannot burn the candle at both ends with impunity. Therefore, a period of rest is required after every meal to give the digestive organs a fair chance, and this period must be proportioned to the digestibility of the food, the heaviness of the meal, and to the condition of health of the subject. A strong man who is fit and well can take greater liberties than a weak, undeveloped subject, whose occupation is sedentary. The latter's digestive and excretory organs are not in good working order, and hence he needs to be extra careful as regards the quality and quantity of the food he eats, and the period of rest allowed after each meal. The usual custom of city men who rush for trains, immediately after a heavy breakfast, is suicidal, and, as my readers know, occasionally results in their dropping down dead from heart disease. But Nature's

ever-developing protest against a practice which eventually wrecks the health is so gradual that it is seldom heeded.

The converse applies. Severe physical exercise causes a great strain on the system, and temporarily almost paralyses the digestive organs. Excessive hunger has a similar effect. In the first case the subject should rest a little while before beginning to eat, so as to allow the digestive organs to recover, and in both cases he should select simple, easily-digestible food, eat very slowly and deliberately, and should masticate every mouthful thoroughly so as to ease the work for the digestive organs. Many people suffering from semi-starvation have died from the effects of "wolfing" food, and all suffer more or less if they eat too heartily or too rapidly when affected by physical exhaustion, or great hunger. No food should be washed down. Before taking a drink the mouth should be completely empty.

The intelligent athlete makes a study of health in all its different aspects, and realises that moderation is the keynote to success. When in perfect health his digestive and excretory organs are in infinitely better working order than the average healthy man, and yet he finds that he can take no liberties.

Training.—My own system and experience, based altogether on the necessity for building up a perfect foundation of health, may prove useful. I still carry

it out to a certain extent, although, of course, modified to suit advancing years and more limited physical exertion.

I rose about 7.30, had a cold bath (with the edge taken off it in winter), or else a sponge down and wash in hot water, followed by a cold bath, and breakfasted about 8 on porridge, fried bacon, eggs, toast, and weak tea. About 9.30 I reached my office, and at 1 p.m. had what was practically the meal of the day, usually consisting of but two courses. Sometimes I had fish, on other occasions meat, chicken being my favourite dish, varied by a chop, a little rabbit, or such like. Beef was usually avoided owing to the extra work which it entails on the digestive organs. Then followed the second course of some simple sweet, such as sago, rice, tapioca, custard pudding, pancakes, or fruit, but pastry of all kinds was taboo. I ate slowly and deliberately, thoroughly masticated every mouthful, and stopped before the repletion stage was reached. If, on returning to my desk, I felt sluggish or sleepy, I concluded that the meal had been too heavy, and was more careful next time. I drank water; neither alcoholic drinks nor smoking were indulged in.

I left my office at 5.30, and, in the preliminary stages of training, indulged in steady but fast road riding, so as to get my muscles, skin, heart, lungs, and excretory organs into good order. I finished these rides at my own house, had a thorough rub down, and changed

my clothes. Often I had a warm bath, which promotes the proper functioning of the skin.

Later, when path-training began, I proceeded cautiously to develop my pace by slow degrees. At first I indulged in long steady slogs, with a brisk finish up. Then, when I had got my organs into thorough working order, and my health perfect, I turned my attention to speed work pure and simple. On one evening I would do two or three short sprints of 150 yards, with an interval of steady riding round the track between each. On the next evening I would do a few miles at three-quarter speed, and then sprint a quarter-mile "all out," or perhaps do a 300 yards sprint and a second of only 100 yards. I made one inflexible rule, and that was never to sprint "all out" more than once on any particular evening, for such an effort makes a very severe call on one's physical powers, and if repeated frequently does more harm than good, and often causes complete staleness.

The second stage of my preparation was quite as important as the first. After the last sprint I rode straight to the dressing-room, and having waited a minute or two to let the perspiration develop, I took off my togs and my trainer rubbed me down with a rough towel, until the moisture ceased to issue from the pores of the skin. With hand gloves he then rubbed me all over in circles with a quick, light movement, and always upwards, so as to assist the flow of

blood to the heart. He afterwards repeated the same operation with the hands, the whole process taking close on half an hour. Such massaging had the effect of getting the skin into perfect order, without which the athlete is unable to get rid of the waste products quick enough to prevent becoming "baked" when the pinch comes in a hard run race, and it also makes the muscles lissome.

My next stage was to dress quickly, and during the operation I discussed a cup of hot Bovril, as I always felt peckish after my training spins. I then made tracks for home, and about 7 o'clock had a light supper which included a small portion either of fish or meat, or else two eggs lightly boiled.

My preparation was based on common-sense principles. The prime object was to get and keep in perfect physical health, and that is what everybody should aim at, modifying the programme according to the needs and circumstances of his particular case. Severe training is dangerous for all but the sound. Too much ordinary exercise is dangerous for the physically and constitutionally delicate. These classes are the extremes. In every case, however, excess is likely to be indicated by complete exhaustion, failure of appetite, and insomnia. I once lay awake an entire night after riding six races in succession on grass. I had tried my system too highly.

Practical demonstration is better than theorising,

and I will therefore offer a few typical experiences proving the necessity of giving intelligent consideration to one's digestive organs, when indulging in physical exertion or suffering from exhaustion.

In 1884 I was competing in a fifty miles road race in the Phoenix Park, Dublin. At that period my only knowledge of dietetics was that I should eat wholesome food when hungry, and that I could not do myself justice on an empty stomach. Accordingly I carried with me a few tit bits of chicken, and at about thirty miles, when travelling strongly in the front rank, I ate a few mouthfuls, but unfortunately had no chance of easing meanwhile, as the struggle was fierce. Within a mile I was off my bicycle suffering from absolute exhaustion. The call on my digestive powers necessary for the assimilation of the meat, when I was already exerting myself almost to the utmost limit, had reacted on my physical powers. Subsequent experience taught me that I would have suffered no ill effects if I had slowly masticated a few very small portions of dry toast, or a banana.

I learned by experience that when indulging in competitive athletics, a moderate meal should be eaten, not less than two hours previous to the start. I favoured chicken or chop, with dry toast. I also found that success was impossible on an empty stomach, and consequently in case of a lengthy programme I found it advisable to eat a very few morsels of dry toast or



A Full House.

The Williams Lightweight (1½ lbs.) for one.

[To face page 140,

banana when a sufficiently long interval occurred between the events to enable me to recover from the call on my system resulting from setting the gastric juices in action.

My experiences when touring, however, have afforded innumerable examples of the ineptitude resulting either from a full or an empty stomach. There is a complaint known amongst active cyclists as the "hungry horrors." It comes on suddenly and unexpectedly, apparently just about the period when the stock of fuel supplying the motive power is used up. Very often one is not conscious of being hungry; something seems to go wrong with the running of the machine, and a dismount is made to investigate and oil up. Often the real cause is not located until such complete exhaustion sets in that it necessitates a meal and a long rest to recover from the effects and permit of full digestion.

It has very often happened to my companions on long tandem rides. On one occasion we were travelling from Gorey to Dublin, and had done twenty-five miles at a spanking pace and with the minimum of effort. Suddenly the machine began to run heavily, and I at once asked my companion: "Are you hungry." He declared indignantly that he was not, evidently resenting the suggestion that he was to blame. I examined and oiled up the machine, but on re-starting matters got worse, and on reaching the foot of a long climb I

called a dismount, and producing the emergency rations which I always carry on such long rides, insisted on his partaking. He did so, and then we very slowly walked the incline. On remounting, the machine flew over the ground with its accustomed life, and we reached our destination full of energy.

On the other hand, a heavy meat lunch has a numbing effect alike on the mental and physical powers. A considerable rest is required before again taking the road, and even then the severe call made on the digestive organs is felt far into the afternoon.

My system when touring is to eat little, but often. I like an early breakfast of porridge, bacon and eggs. The interval of packing up, paying the bill, and overlooking the bicycle is generally sufficient for digestive purposes, but it is advisable to travel slowly at first and walk the steep hills. Two or three hours afterwards a halt should be called, and a crust of brown bread, slice of dry toast, or such like, discussed, and this should keep one going until it is time for lunch. Fresh eggs, lightly boiled, toast, bread and butter, form a most suitable mid-day repast, which might with advantage be supplemented by cheese, figs, raisins, or some of the special dried fruits which vegetarians favour. Such a meal is easily digested, and supplies quite enough nourishment. The principal constituents can usually be procured in a wayside cottage for a trifle, and the cheese and fruit can easily be carried. A little

weak tea as a lubricant is refreshing, but it does not assist the digestive organs.

A piece of dry toast should be carried in the pocket and eaten about 5 p.m. A few figs, raisins, almonds, or nuts might be used to supplement this feast. The evening meal should be discussed after reaching one's destination, and no matter how hungry one may be, it is better not to indulge to repletion. Nothing more should be eaten before retiring. It is detrimental to one's digestion and prevents sound and healthy slumber to retire with a full stomach.

I have already warned my readers to be cautious about their food when ravenously hungry, exhausted, or weakened by illness or physical debility. I will now give an example emphasising my point.

About ten years ago I got an attack of influenza, my only real illness during a period of over a quarter of a century. When convalescent I joined a party of friends who were spending the Easter holidays at Shillelagh—where the sticks come from. I was exceedingly weak, and incapable of anything in the shape of severe physical exertion. A friend of mine, Mr. E. P. Moorhouse, an old racing crack, took me out for short trips on a tandem bicycle, he, of course, doing the major portion of the work. The change, fresh air, and gentle exercise, worked wonders, and on the third day I ventured on a twelve miles ride to the town of Tullow, from which I felt much invigorated,

and for the first time for weeks developed a keen appetite. Our party of about a dozen stopped at the local hotel for lunch, but unfortunately the only provender the hotel could offer was beefsteak. I foolishly ate a little, not more than a few ounces weight, and within ten minutes was lying on a sofa in a state of collapse. My vital energy was unequal to the task of digesting that little morsel of beef. I lay for two hours before I recovered from the effects. All would have been well if I had eaten a fresh egg and dry toast instead.

These experiences and recommendations apply primarily to those who are physically and constitutionally strong and indulge in regular exercise. If such precautions are advisable under such circumstances, how much more essential is moderation, combined with a wise choice, necessary in the case of the delicate and weakly, who are unable to indulge in much exercise and frequently take hardly any! And yet these are the very people who feed comparatively heartily and eat whatever their fancy dictates. The strain on their digestive organs is more than they can bear, and failing health results, instead of increased strength and vitality.

I would again emphasise the necessity of adapting one's self to circumstances, even in the case of the robust. The athlete as well as the average man who takes regular exercise develops a good healthy appetite,

concurrently with the development of muscle, heart, and lungs. The stomach adapts itself to the increased volume of food necessary to supply the vital force. If, however, he suddenly ceases to take regular exercise, he should also diminish the daily food allowance, though the stomach in its developed capacity may at first clamour for a bigger supply. In other words, the food should be made approximately proportionate to the altered circumstances. If this course is not followed, the digestive and excretory organs will be unequal to the task they are called upon to perform, and indigestion and other complaints will follow. This explains why so many athletes become dyspeptics.

The proper and regular functioning of the bowels is of vital importance. Constipation means nothing less than self-poison. It is essential, therefore, to respond at once to the calls of Nature. If this is made a custom, aperient medicine will rarely be needed.

CHAPTER XII

VEGETARIANISM

PERSONALLY I do not particularly favour any of the "isms" or hold with those who are violent anti-this or anti-that. Man is essentially fallible. The greatest scientists and doctors differ, and one school and its adherents rail against the crass stupidity of others, and with consummate self-confidence contend that they alone are right. It is the same in religion. It seems to me that no man or group of men can be absolutely right on every vital point or on every side issue, and therefore we ought to be more humble in advancing our views, more considerate for others' opinions, and more ready to recognise that we are all groping in the dark, and that the man who realises this is generally nearest the light.

The awful mistakes made in the past by the medical fraternity should bring these truths home to us. Take, for example, the practice general not so many years ago of bleeding, in complaints to fight which the patient needed all his strength and vitality. Thousands must have been killed by this mistaken treatment. The same applies to the treatment which used to be given

in typhoid cases, and the frequent prescribing of alcoholic drinks, under the mistaken impression that they were nourishing.

Dr. J. Stenson Hooker, in dealing with the subject in *The Higher Medicine* writes:—

Even but a few years ago it was a favourite plan of the West End physicians to prescribe “an undertone mutton chop and a glass of good port wine” for lunch; it was all wrong, all totally unscientific, but the fiat went forth with authority and the directions were carefully carried out until the patients, too, were also carefully carried out—in their coffins—their systems replete with the effete products of multiplied mutton chops.

Dr. Jennings, in *Cycling and Health*, says:—

Although a young practitioner with a head full of science may begin life by recommending temperance and sobriety to the over-fed dyspeptic, he soon learns that if he is to live by his practice he had much better lose no time and order blue pill. *Populus vult decipi*.

To prescribe for the public to eat less and to exercise more would be a stale jest.

Again Dr. Jennings writes:—

Meat may be of use sometimes, but it is a mistake to consider it a necessary article of food. It is also a mistake to suppose that it is a privation to adopt a vegetarian diet. The truth is that every sensual pleasure in life is increased.

In fact, mankind is too “cocksure” as regards every question under the sun.

I am not a vegetarian, and am never likely to be. On the other hand, my eldest son is, and thrives on it, and I have many friends by whom the fleshpots of Egypt are abhorred.

It is, therefore, with all due diffidence that I approach this subject, albeit, with a certain amount of experience. My views are briefly these:—

That the majority of well-to-do people eat far too much meat.

That in all such cases a larger indulgence in the fruits of the earth and a lesser indulgence in meat would prove beneficial to health.

That many vegetarians would be better if they ate a little meat, carefully selected.

That many meat-eaters would be better if they lived wholly on the fruits of the earth.

That a limited quantity of meat is *generally* necessary if one wishes to excel in feats of strength and endurance.

That meat causes many diseases directly and aggravates others.

That the fruits of the earth are not apt to cause such diseases.

I have personally reduced my meat consumption very materially, and have benefited thereby, and think that the average man should not eat meat more than once a day, especially if he leads a sedentary life. Those who indulge three times a day and finish up with a dinner of many courses are digging their own graves with their knives and forks.

According to Dr. Stables, who, I may add, is not a vegetarian, milk, cheese, eggs, and oatmeal or flour

include all the food necessary for health and strength of body.

I would advise each of my readers to study the question for himself; to carefully avoid making any sudden or radical change or the common mistake of rushing to extremes, and to make absolutely certain that the fruits of the earth which he substitutes are wisely selected so as to provide the necessary constituents.

The term "vegetarian" is misleading. To the man in the street it conjures up a vision of greasy cabbage or cold, squashy cauliflower. As a matter of fact, this class of food is not much favoured by the cult. The foundation of their diet consists of good bone and sinew producing porridge, eggs cooked in many and various toothsome forms, wholemeal bread, milk, nutritious nuts, nut butter, fruits dried and fresh, delicious vegetable soups, and such like. Food of this description is ample to ensure strength, staying power, and perfect health. White bread should be avoided. It ruins the teeth and contains little nourishment. Hovis bread is to be recommended. It is particularly rich in proteids.

In the old days, when porridge was the staple food of the Highlander, and bakers' bread, meat, and tea were seldom indulged in, no finer men were to be found in the whole wide world. It has been abundantly proved that meat can be dispensed with in most cases without

ill results, and that the majority of people would find it advantageous to eat less meat and use the vegetarian's experience to supplement their meals. The choice should, however, be made with discrimination and a knowledge of food values, always bearing in mind that beef and pork make a considerable tax on the digestive organs, and are most likely to convey specific diseases, such as consumption, in the case of beef which has not been fully cooked. Proper cooking kills all germs. Uncooked vegetables also may breed disease through having been washed in infected water, and oysters taken from impure beds cause typhoid.

Vegetables contain valuable salines, but when soaked in cold water to keep fresh these are to a great extent lost. Only the roots should be put in water. Blanching in hot water has the same effect, or boiling, if the essence is drained off. Steaming is the best system of cooking, as the salines are then preserved. Cooking them in soups is also to be recommended.

There is another aspect of the question which appeals, or should appeal, to the great mass of the people, and that is its economical side. There are thousands of poor people who purchase second-class meat—tinned or otherwise—under the erroneous impression that meat in some form or other is essential to health and strength, and there are thousands who, though in a better class of life, can ill afford the cost of good meat, but who expend a comparatively large proportion of

their income on it in the belief that it is necessary. If these people could only be persuaded that the fruits of the earth are well qualified to produce health and strength and mental virility, they would no longer feel compelled to spend money on food which is dangerous to health, except it is of the highest quality, and which under few circumstances is essential, with the result that they would be far better off than heretofore, and the wealth and prosperity of the nation would be increased. Absolute poverty could in many cases be converted into comparative affluence by an intelligent study of the food question.

CHAPTER XIII

DRINK

THIS is a wide subject, and in the scope of this work it is only possible for me to touch on the fringe of it. Speaking generally, it is a bad practice to drink between meals. It is especially dangerous in the case of water, the purity of which is doubtful. According to Surg.-Capt. MacCabe, who made a special study of this question in South Africa, "drinking between meals breaks the first important rule of training, and is the best way of securing the unopposed landing of an army of enteric or dysentery germs." This applies especially to soldiers in the field, but is also of importance to the ordinary civilian.

The explanation is simple. When drink is taken with or after food the presence of the latter in the stomach stimulates the flow of the gastric juice, bile, etc., which act as disinfectants and tend to destroy the vitality of the germs which accompany the liquid into the system. Consequently the danger of contracting disease from those germs is reduced. If, on the contrary, one drinks on an empty stomach, the germs are not exposed to the action of the gastric juices, and pass into the system in their best fighting trim. This is especially so in the case of water and milk. On the

other hand, no food should be washed down, as this prevents it being mixed with the saliva or thoroughly masticated. One should wait until the mouth is empty, or, better still, until immediately after the meal.

As regards alcohol, its use is seldom beneficial, and taken regularly or in excess is always harmful. Its action when taken on an empty stomach is, however, especially dangerous. It upsets the digestion, and its absorption into the blood, even when indulged in moderately, affects the fighting powers of the white corpuscles. In extreme cases, as when, for example, a man gets into a condition of absolute drunkenness, the white corpuscles are, so to speak, similarly affected. Their movements become uncertain and aimless; they are no longer in a condition to grapple with the death-dealing germs, and an individual in this defenceless state runs serious risk of contracting some malady which may, or may not, prove fatal.

There is another and more insidious direction in which alcohol injures one's health, especially when indulged in between meals. I can best describe it in the words of Surg.-Capt. MacCabe when lecturing at Aldershot:—

Every thing that is put into the stomach is absorbed by the stomach or intestinal veins, which join to form what we call the portal vein. This vein enters the lower surface of the liver and quickly divides up into minute veins and capillaries, so that the products of digestion may be acted upon by the liver substance. Now, if you pour whiskey into an empty stomach it is at once taken to every cell of the liver substance, and the action of these

repeated doses of whiskey on those tender cells is to set up an inflammation which, if often repeated, first hardens them, and then replaces their substance by a new and inflammation-created tissue. This means that the liver is no longer fit for its work; it has undergone more or less a change of structure. . . . Now, this is a subject about which I don't want you to think you are being talked to by a faddist. I would like to tell you, by all means have your glass of beer if you really like it, but it is my duty to tell you that if you decide to do without stimulants altogether, you will be better men—better developed, better at games, and better in a fight, if it should come to one. There is now no room to doubt—we have proved it scientifically—that man is better without alcohol; that it is actually harmful if taken between meals, because it upsets digestion; and that it should be altogether avoided by men who are in training.

Violent exertion naturally causes a craving for drink to replace the moisture which has been extracted from the system, but this craving is often of an artificial nature, due to the mouth and throat becoming parched. It is better to resist it, or else be content with rinsing out the mouth until meal time, when the activity of the gastric juices is likely to account for injurious germs. Constant drinking seems to beget thirst without apparently relieving it, except temporarily. If the first desire is overcome, it is easy to abstain. The indiscriminate drinking of milk is particularly dangerous. It has an extraordinary facility for absorbing germs of all kinds, and, in addition, many milch cows are affected with tuberculosis. Recent investigations in London and elsewhere have resulted in the location of the deadly bacilli in the milk supplied by many dairymen. All milk should, therefore, be

boiled before use unless one is very certain that the source is pure. The same applies to water, but perhaps to a lesser extent.

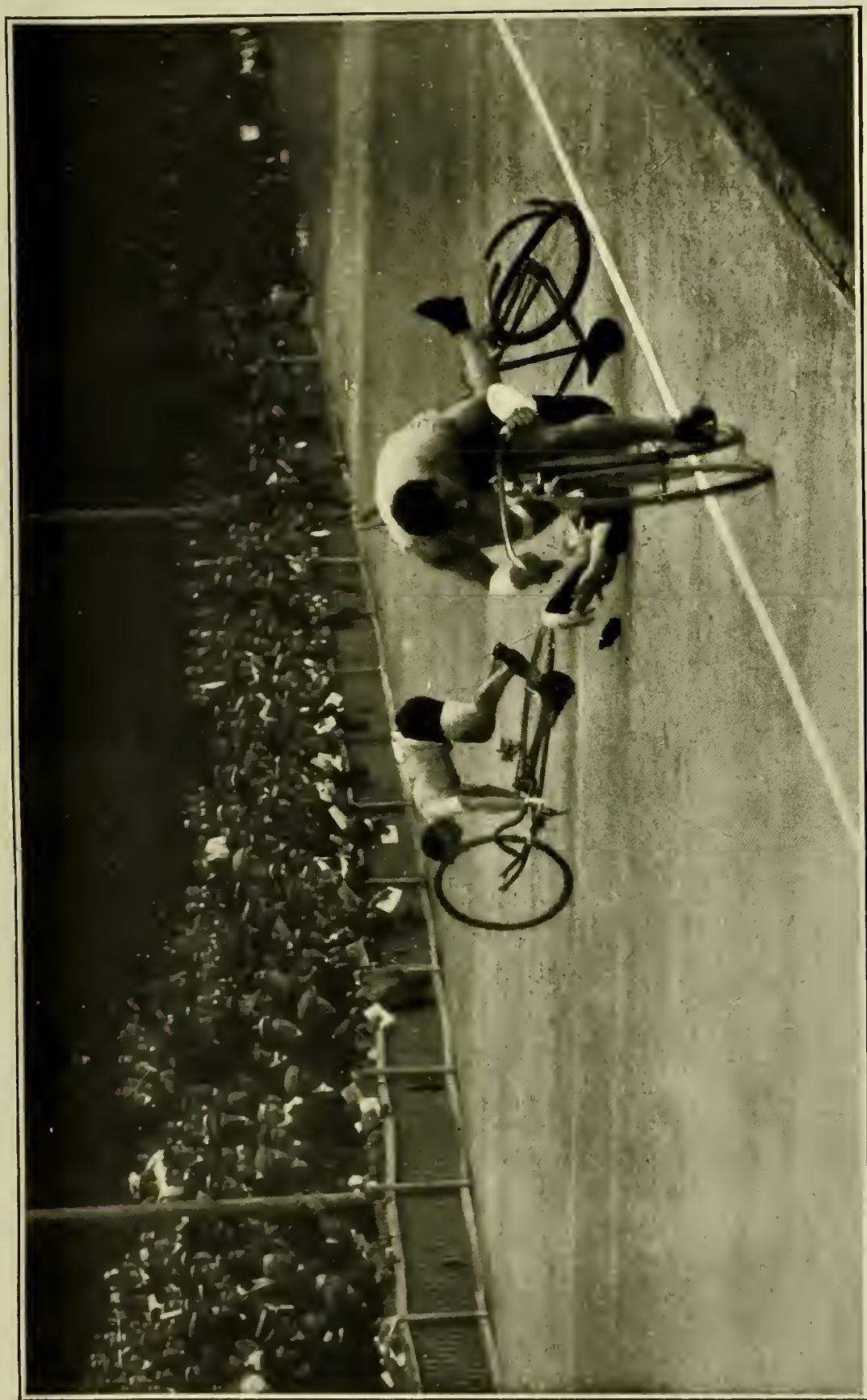
From a health point of view alcohol is a poison. As a medicine it may at times be used to advantage, just as other poisons are, and has saved many lives by keeping the heart beating; but as a beverage pure and simple, it is always injurious, and there is not one of my readers who does not know of cases where oft-repeated indulgence has caused physical ruin and even death. Its insidious action is such that only in a very small proportion of cases can death be traced directly to it, for its action tends to destroy the coat of the stomach, ruin the digestion, and enfeeble the army of white corpuscles—those valiant militants who are always fighting against the deadly, death-dealing germs. It is a well-authenticated fact that if a man is foolish enough to get what is vulgarly called “dead drunk” the white corpuscles seem to share the same fate. At all events, they are paralysed, and the victim is defenceless should he at the same time be exposed to dangerous germs. Disease and death may follow days or weeks later, but they are not attributed to alcohol. The danger caused by alcohol is always present. It is only a question of degree. The man who merely indulges until he becomes cheerful incurs little risk if he is in good health. The man who becomes “cinematographically drunk”—if I may use

the expression—weakens the garrison, while the man who becomes “paralytic” is absolutely unprotected.

Two cases which came under my personal notice are instructive. One was that of a lady relative—a very strict teetotaler—who when in the crisis of a severe illness was just able to articulate “Champagne.” I knew that nothing but a great extremity would have produced such a demand. A spoonful of this powerful stimulant arrested the hand of Death. If the lady had been accustomed to the regular use of stimulants it is more than probable that it would have failed her in the crisis. As it was, it proved the most effective medicine she could have taken.

The other case was that of a man who had fallen a victim to the craving for drink, but he had succeeded in pulling himself up on the brink of the precipice. For years he was a teetotaler, and was happy and prosperous. It so happened, however, that while on a visit to his mother he contracted a very bad cold through exposure, and as the result of earnest solicitations on the part of his mother, he drank a glass of hot whiskey and water. The craving returned, and within a comparatively short period he drank himself to death.

The insidious danger lurking in alcohol was brought home to me very forcibly by an accident which occurred in 1885. I was involved in a smash while representing Dublin University in a cycling contest against Cam-



A Smash-up on the Racing Track.

It will be noticed that the rim of one of the machines has broken right across.

[To face page 156.

bridge. I fell on my left knee, and the patella was left absolutely bare as though the flesh had been punched off it. For five or six weeks I was attended by the late Surgeon Wheeler, and he told me afterwards that had it not been that I was practically a teetotaler and in the pink of condition, the leg could not have been saved.

Athletes in all forms of contests recognise the injurious effects of alcohol, except, perhaps, as a pick-me-up or "dope" taken during the last few minutes of a severe contest. The effect is only temporary, however; the reaction leaves one worse than before, and hence if it is administered too soon it defeats its own object.

This temporary ability to re-energize the system is very misleading, and no doubt has caused the erroneous view that the beneficial results are lasting.

Cyclists who indulge in touring or prolonged effort on the road, at an early stage of the pastime discovered that alcoholic beverages went straight to the legs. I have on several occasions been tempted to indulge in a bottle of Bass on a hot summer's day, but always with the same results. For quite a long time afterwards my legs felt like lead, and hill-climbing became a positive labour. Now, my strongest tippie when on tour is a glass of ginger wine and a bottle of soda-water, and I invariably eat a biscuit or crust of bread with it.

Whilst pointing out that alcohol is a poison, deadly or comparatively harmless, according to the amount

consumed, I would like to assure my readers that I am not a total abstainer, and am not above enjoying a good dinner occasionally. In fact, in my training days I found such actually beneficial, for, forming, as it did, a break in the strict routine of keeping fit, it prevented me from becoming stale. What I wish to emphasise is that alcohol even in moderation is not beneficial; that taken regularly it effects insidious damage, and taken in excess it is most injurious. It is particularly deadly when imbibed at regular intervals all day in small doses. The tippler is a more hopeless case than the man who occasionally breaks out and gets "honestly" drunk.

Excessive meat eating causes a craving for alcoholic drinks.

Smoking is another injurious practice. It is a most insidious pleasure, and undoubtedly soothing, and indulged in with moderation will rarely cause any ill-effects. Most people, however, are not strong-minded enough to resist the temptation, and consequently the habit grows on them until at length they become the devoted slaves of Lady Nicotine, to the injury of heart, lungs, throat, and digestion. Cigarette smoking is particularly injurious, and more insidious than any other form. Pipe smoking is the safest. I should say that very few people indeed would be the worse for smoking an ounce of tobacco a week, but the difficulty of keeping within such a limit is very great.

CHAPTER XIV

CLOTHING

THE keystone of hygiene, so far as clothing is concerned, is pure, natural wool. Nearly thirty years ago I learned by the simple process of trial and error certain properties of wool as compared with linen and cotton. In those days most of my friends were enthusiastic cyclists, and we sallied out into the country every Saturday afternoon, wet or fine, and had high tea together at some convenient hostelry. Frequently our clothes were completely saturated, and, being young and foolish, we sat in them for several hours, if possible, in the vicinity of a fire. Now, I noticed that when I wore a linen shirt I felt damp and clammy for the whole evening; in fact, my shirt remained damp long after my coat and outer garments had dried from the heat of the room.

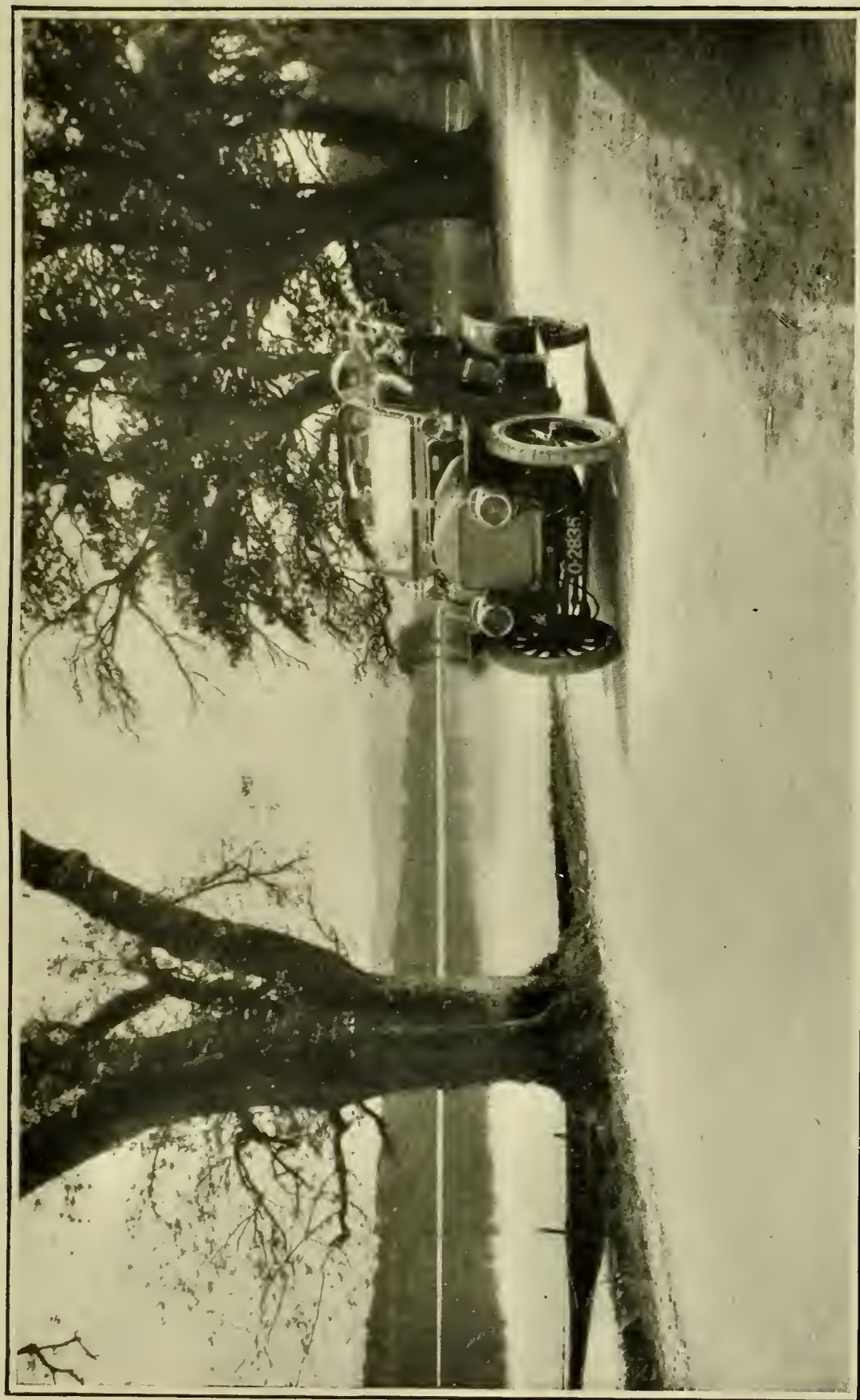
On the other hand, when I wore a woollen shirt I did not feel damp and clammy, and the shirt began to dry before the outer garments. I have found the inner side of a woollen shirt next my skin quite dry within a space of twenty minutes or so, while my coat was still wet, though exposed more directly to the heat of the fire.

I also found that I was apt to catch a chill or cold from a damp linen shirt, but that a damp woollen one caused no harm, provided that when resting I kept out of draughts and cold winds. The phenomena surprised me. I could not understand them, but I acted upon them and found, as a result, that damp clothes did not give me cold.

Since then I have learned the reason for this, as well as many other peculiarities about wool, which I will set down for the benefit of my readers, prefacing my remarks by reminding them that before adopting wool I was peculiarly susceptible to colds, and since adopting wool I have slept on many occasions in tents with no protection overhead except a covering of the thinnest lawn, through which heavy rain sprayed in the most refreshing fashion, and yet I have never caught cold.

Wool has the effect of attracting the blood towards the skin, and stimulating the action of the pores and innumerable tiny blood vessels leading to same. Linen and cotton, on the other hand, repel the blood, which causes a chill and—in damp weather—a clammy feeling. You all know the sensation of getting between the sheets on a cold, damp night.

Then, again, wool is porous, and allows free access to the skin for the life-giving and energizing air. Linen, on the other hand, is almost impervious to air, and becomes completely so when damp. Those who manu-



By the Shores of Loch Lomond.

[To face page 160.

facture linen and cotton underclothing have shown that they recognise the necessity for ventilation, and the impervious nature of these fabrics, by designing various kinds of cellular patterns, which allow of the air reaching the skin, but cannot counteract the tendency of linen to drive the blood from the skin.

Hence, in the case of wool, one's garments begin to dry at once throughout, but especially quickly near the skin, which the blood, attracted by both air and wool, warms. On the other hand, air cannot penetrate the damp linen shirt, and the chilled, bloodless skin will not help to dry it. A chill results, with more or less serious results.

Who has not heard of lives lost through contracting pneumonia from damp linen, or cotton, sheets? On the other hand, one can sleep in damp blankets or damp woollen sheets, as the case may be, without any risk whatever, provided there is enough covering to maintain the vital warmth.

When my wife and I began to sleep out winter and summer I was greatly concerned about this damp question, for mists and vapour found ready access through the open tent door, and often our Jaeger blankets were covered with moisture like dew-drops, through condensation. A carbotron stove was procured, and twice or thrice a week the tent was laced up for a few hours during the day and the stove lighted. We never do that now. The dew-drops may gleam on

the hair-like filaments of the wool, but we heed them not, confident in the knowledge that during the day the air will sweep through them and dry off the moisture, and that, even if it does not, no harm will result. Super-sensitive people complain that wool next the skin tickles them. It will not tickle them to death, however, as linen chills to death. The finest Jaeger is as soft and smooth as silk, and the most delicate skin becomes accustomed to it in a very short time.

The porosity of wool as compared with linen confers another great advantage. It provides a ready outlet for the foul and poisonous exhalations of the body, which in the case of linen are inclined to ascend between the shirt and the skin, so that a considerable portion of them are re-breathed, thus lowering the vitality and enfeebling the white corpuscles.

It is essential, whether by day or by night, to have a free inlet for the air and outlet for the exhalations, hence it is not sufficient to have the under-garments alone of pure wool. The outer garments are nearly as important, and this includes the linings and stiffenings, which are generally made of linen or cotton. It is vital, therefore, to patronise a tailor who will guarantee pure wool throughout, and I would advise my readers to specify Jaeger linings and stiffenings, as otherwise it will prove difficult to check the tailor's work, the parts referred to not being exposed to view. In using Jaeger

one is certain of purity. Most of the cheap imitations are adulterated.

In another portion of this book I have drawn attention to the fact that less clothing is required when sleeping in an open-sided tent or bungalow than when sleeping in the house. This, no doubt, is largely the result of the increased vitality due to the fresh air which enters the tent in ample volumes. But this is not all. The wool covering essential when sleeping out of doors gives free access for the air to the skin, and free outlet for the exhalations. In the house people use sheets, coverlets, or eiderdowns, which are practically impervious alike to air and exhalations. The skin is constantly in contact with foul air, and as the air is bound to rise along the open space towards the head of the bed, much of it is re-breathed, thus affecting the sleeper's vitality and rendering heavier clothing necessary, as well as increasing the danger caused by harmful germs.

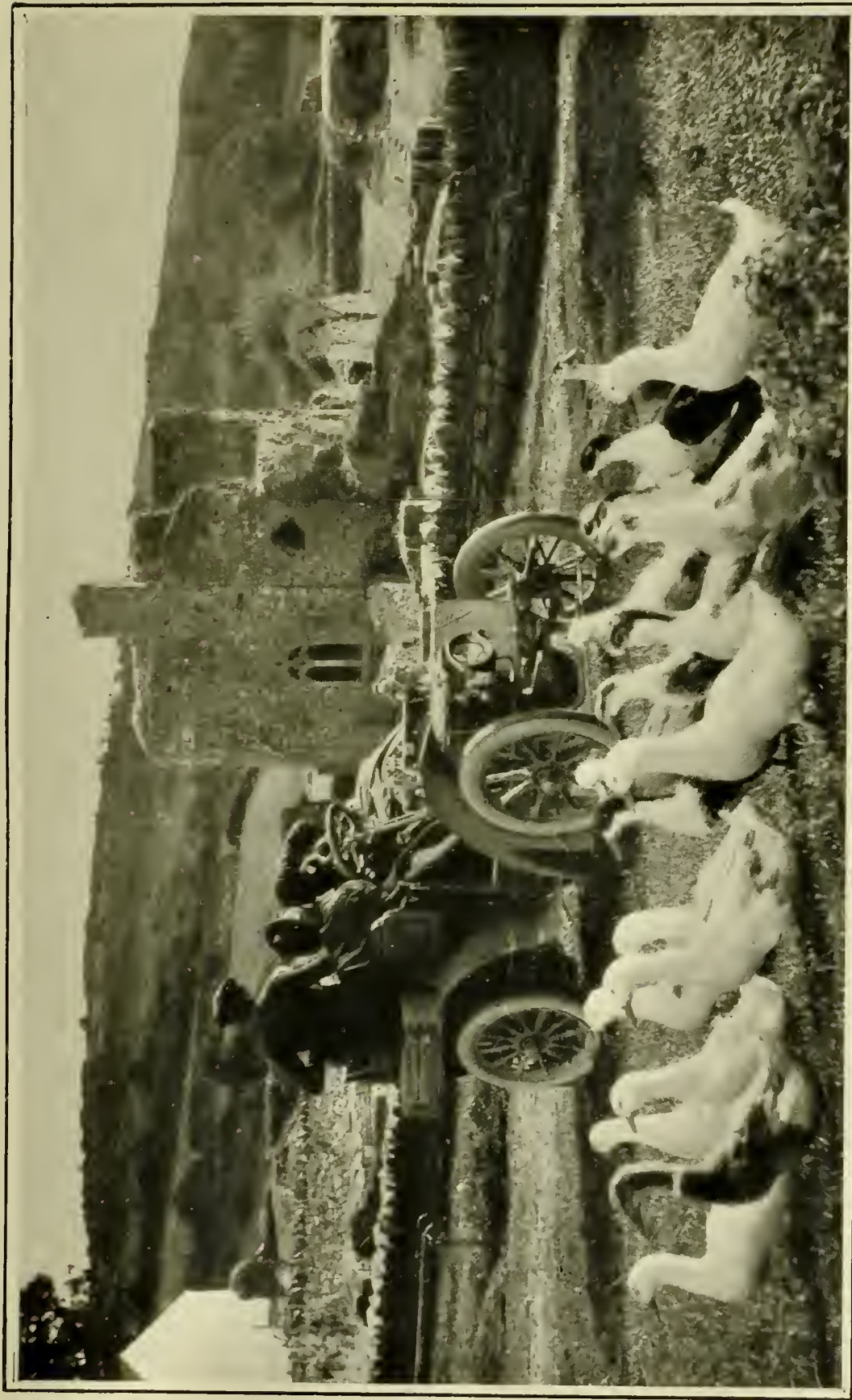
If I have succeeded in convincing my readers as to the value of pure wool, I hope that whether they sleep in or out they will take steps to adopt it for their clothing both by day and night. The Jaeger Company, of Milton Street, London, E.C., produces goods suitable for all conditions and varying tastes. I mention this firm especially, because I know their stuff is pure, whereas it is impossible to speak confidently of their imitators. Only once did I purchase elsewhere,

and I suffered. It was a light summer shirt, and getting over-heated from cycling I caught a chill. Investigation disclosed the fact that cotton was mixed with the wool. For the rest of my natural life I will remain satisfied with the best—"the only best," as an Irish waiter once said to me when I complained of the quality of the claret I had ordered for dinner.

Over-clothing is a mistake. The weight at night is oppressive, and the numerous layers of blankets offer an ever-increasing obstacle to the free passage alike of fresh air and foul. Therefore, reduce your covering to the limit that will give sufficient warmth. It is a wise precaution to have an extra blanket convenient. The coldest period of the night is just before the dawn, and I always keep a "spare" alongside should the increasing cold awaken me.

In the day time it is almost as important not to over-clothe, but at the same time it is necessary to keep warm. In our variable climate it is a wise precaution to look at the thermometer each morning and to regulate one's clothing accordingly. On a really warm day the thinnest possible Jaeger shirt will prove sufficient. In temperate weather a heavier shirt might be selected, and if it is actually cold, an under-vest should be added.

The therapeutic value of colour is now fully recognised by the medical profession, and the effect in the case of lupus of the absorption by the blood vessels of the blue and violet rays is well-known. On the other



Mellifont Abbey, Co. Louth.

[To face page 164.

hand, actinic rays are thought to be harmful in cases of smallpox. Unquestionably, different coloured rays can be absorbed into the blood stream, and have varying effects.

Similarly, in the matter of clothes, colour undoubtedly is of great importance. For example, it is admitted that it is the actinic rays of the sun that causes sun-stroke, and it is quite a common thing for officers who have to march in blazing heat in India to wear orange-coloured shirts, and to line their helmets with orange flannel.

For ordinary conditions, white flannel is the most wholesome wear. It permits the sun's rays to reach the body. On the other hand, black, red, yellow, or green resist those rays which have germ-killing powers, though the three latter possess good qualities in other directions. For example, blue rays are soothing, green beneficial to the nervous system, red useful in the case of certain diseases and productive of good effects in cases of depression. Black is the most unhygienic of all, and should be avoided.

On the whole, I should think that white flannel for hot weather and light grey clothes of pure wool for average conditions, will give most satisfactory results.

When taking such exercise as cycling, it must always be borne in mind that heavier clothing is necessary when not exerting oneself than when actually riding, for when heated a chill is apt to result unless the trunk

is well covered. My system is to clothe myself so that I can dispense with a waistcoat when actually riding, but to put it on immediately after dismounting. In case of emergency a sheet of brown paper over the chest is useful. It should always be carried in winter, especially where there are long hills. Hundreds of cyclists have caught severe colds when free-wheeling after being over-heated. It is a wise precaution to look at the thermometer each morning, as already recommended, and vary the clothing accordingly. For this purpose both shirts and undervests of varying weights should be purchased. It is important to prevent the cold air rushing up the sleeves and thus reaching the neighbourhood of one's shoulders and armpits. Wind cuffs, forming part of the sleeves, are effective, but I would recommend, in preference, an ingenious tension spring made by Messrs. Terry & Co., of Redditch, and sold at a few pence each. It is intended to take the place of a trouser clip, but performs the same duty admirably for the sleeves.

For walking, golf, etc., it is easy to carry a light overcoat to be put on when one feels chilly. Mackintosh should be avoided. It is most unhygienic. It causes excessive perspiration, keeps the air from the skin, and confines the body's exhalations. For protection from rain when indulging in outdoor sports I can thoroughly recommend Gabardine, made by Messrs. Burberry, of Basingstoke. It is proof against ordinary rain, and

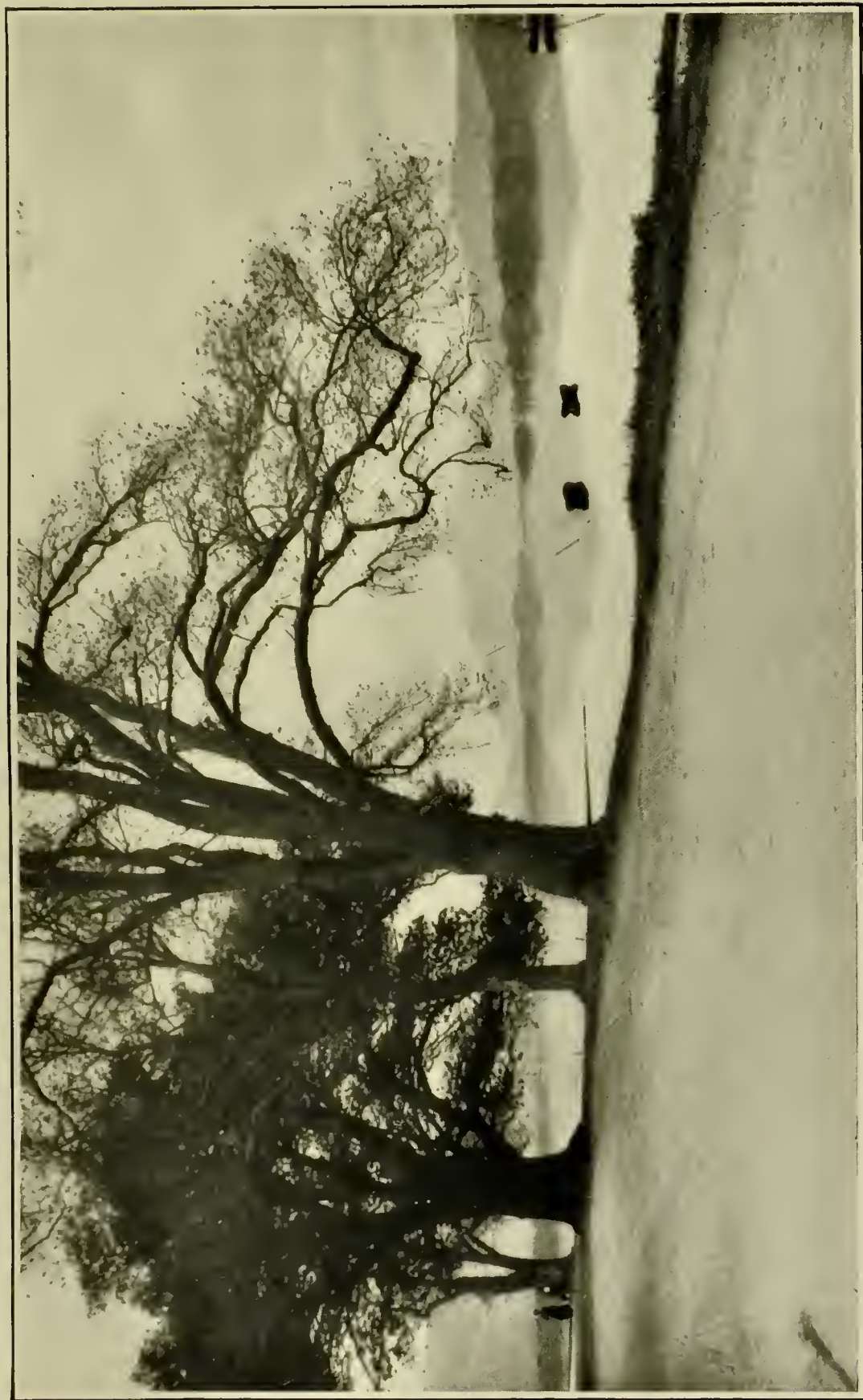
at the same time is porous to air. I have used cycling capes made from this material for over twenty years. They do not overheat one, especially if made long in front so as to drape over the handlebars of a cycle. They will stand hours of rain, although the end of one's sleeves are apt to get wet.

For motoring the problem is rather a more difficult one, for not only is it essential to keep warm and dry, but it is necessary to prevent the cold air passing through one's garments, and chilling the skin, which is likely to occur when driving at a fast pace. The only material which I have found to combine these advantages is made by an Irish firm, Messrs. Mulcahy, Redmond & Co., of Ardfinnan, Co. Tipperary. It is known as Galtee cloth. This fabric is made of three different kinds of material; the outer is of mohair; woven with this is a certain amount of pure merino, while the inner layer is Irish frieze. Under normal conditions the combination is porous to air, and, consequently, hygienic, although it does not allow the wind to drive through. When wet, however, the merino contracts and the minute hairs of the mohair come together so closely that even if a hose were turned on to the material, the water would not penetrate. I have used one of these coats for several years, with complete satisfaction.

Leather is not to be recommended, because it is practically impervious to air. If the motorist prefers

wearing an ordinary coat which allows of the penetration of air, I should advise a leather-fronted waistcoat to be worn underneath, or, as a temporary protection, two or three sheets of brown paper would prove quite effective.

The greatest difficulty in motoring is to protect oneself from the water which collects on the seat in very heavy rain, and which, when ordinary rugs are used, is certain to penetrate within a short period, and may cause serious kidney troubles. To prevent this occurring I have designed a kind of home-made skirt arrangement, of thin waterproof, which goes almost twice round one's person, and is hooked at the left side. This ensures an undivided protection underneath and the same in front. The driver can practically sit in water without getting wet, and in case of a heavy side wind which tends to force the rain between the overlapping folds of the coat, this skirt arrangement will act as an apron and prevent it from penetrating. I have dealt with the whole subject of clothing for motoring very fully in the *Encyclopaedia of Motoring*, and have given a drawing to show how the skirt arrangement referred to can easily be made.



The Scottish Highlands.

[To face page 168.]

CHAPTER XV

CYCLING

"I can only emphasise the fact that I consider that physically, morally, and socially the benefits that cycling confers on men of the present day are almost unbounded."—*The Rt. Hon. W. E. Gladstone.*

ELSEWHERE I have expressed the opinion that cycling is about the best possible form of exercise, always given that it be indulged in reasonably, and regulated to suit the physique and constitution of the particular individual. It supplies fresh air under pressure, which is invaluable both for the lungs and blood. The exercise is thorough, and promotes perspiration without causing exhaustion, which is apt to result in other forms of recreation where the weight is carried wholly on the legs. It can be indulged in regularly with the least possible waste of time, and can easily be regulated to suit individual cases. Finally, it affords mental recreation of the best possible kind; in fact, it is a tonic to both body and mind. Over thirty years' experience has taught me this, and I will now proceed to quote the opinions of reliable experts and scientists to prove the statements I have just made.

"Who ever saw a dyspeptic cyclist? I never did, and I have met more cyclists than those engaged in all other pastimes put together."—Dr. D. H. D. Whaite.

"It is easy to understand the effects of this exercise, if we recollect that it produces an extraordinary activity in the bodily organs, much greater than any of the other popular sports."—Dr. Willaume.

"In certain cases of heart disease, especially when associated with obesity, the judicious use of the cycle may render the greatest service."—Dr. Oscar Jennings.

"I have remarked in the case of two of my patients, both aged, particularly in a lady past sixty, the disappearance of long-established attacks of gout by the daily use of the tricycle."—Dr. Cuq (Paris).

"My universal experience has been that cycling exercise is as beneficial, if not more so, than horse exercise, and constantly deprives me of patients by rendering them independent of me. I have seen dyspepsia of the most obstinate type cured by it."—Dr. Laird Somerville.

"As regards the benefit derived from cycling by those suffering from extreme nervousness, it is simply marvellous."—Van Neuzbaum.

"Knowing that physical exercise is the great secret of health, I believe that I shall be able to establish that we possess in the cycle a means of securing it much superior to any heretofore existent, and which is at the same time easy to practise, attractive, and free from all reasonable objections."—Dr. Oscar Jennings.

"I believe that there is no functional disease of the stomach that is not curable by cycling and common-sense dieting. In other words, half the unfortunates who go about from one physician's consulting room to another might (if these were not restrained by the most snobbish of considerations, the fear of criticism) get cured whilst amusing themselves. And if we add to these three-fourths of the remainder of chronic sufferers constituted by the neurasthenic and the hypochondriacal, the practice of the medical profession would surely dwindle into the limits assigned to it by one of my correspondents, who anticipates that one-half of the present doctors would have to retire from business."—*Ibid.*

"Cycling is an exercise of the highest class. It strengthens the muscles, not only of the legs, but of the entire body, furthering hæmatisation, stimulating the appetite, regulating the heart's action, inducing quickness of perception, and giving self-possession. Superior to all sedentary amusements, it is only possible to con-

trast it to walking, compared to which we have twice the speed and an avoidance of its monotony. Again, in the matter of study, its therapeutic value cannot be doubted. I shall not offend an electropath of your distinction in regarding it as a useful adjunct of electricity in the treatment of paralysis and muscular wasting of the legs. Your investigations concerning obesity, rheumatism, and gout, justly represent it as as one of the curative elements in those anomalies of nutrition. Its blood-forming influence points it out as a remedy for chlorosis and anæmia. A ride of some miles is the best laxative with which I am acquainted, and I have no doubt that, by stimulating the heart, by expanding the chest, and augmenting the respiratory capacity, it serves to prevent cardio-pulmoniac affections, and I shall not for my part hesitate to recommend it in pronounced case of tuberculosis, so often benefited by exercise out of doors.”—Dr. Chambard.

The foregoing quotations are all from the writings of well-known medical men. I will now quote the words of a man whose name for more than thirty years has been a household word with cyclists. I refer to Mr. A. J. Wilson, more popularly known as “Faed.” In “The Pleasures, Objects and Advantages of Cycling,” published in 1887, he says:—

“I was always a sickly boy, and did not excel in any athletic game; my lungs were feeble and my limbs indifferently strong. At the age of twelve I contracted scarlet fever, which assumed such a virulent aspect that, after being given up as a hopeless case, I just recovered, but with the total loss of my hearing. From that date to this—sixteen years—I have been totally deaf; and up to eighteen years of age I was still sickly and feeble, with a preternaturally pale countenance, short breath, weak chest and limbs, incapable of running or pulling an oar for a mile at a stretch. Doctors shook their heads when sounding me with the stethoscope, and fellows in the office where I worked were of the opinion that I was in ‘galloping consumption.’

“Ten years have worked a transformation, indeed, in me. I am ten years older, ’tis true, but there is not much physical deli-

cacy about me. My face has assumed a positively ruddy glow of health ; my wind and limbs are good enough to enable me to win occasional races in first-class company on both road and path. I ride almost every day in the year.

" I rode over 7,000 miles in 1885, knowing literally not a day's illness. This change has been brought about by cycling. In 1876 I went bicycle mad, and I have been bicycle or tricycle mad ever since. My friends did all that they could to dissuade me from taking to cycling, as I ' was not strong enough,' but the most rabid anti-cyclist amongst them has long since come to admit that cycling has saved my life, and every member of my family is now a rider."

Mr. A. J. Wilson is now a robust, well-preserved man of fifty, and still retains " the ruddy glow of health."

If these quotations, capped by my own personal experience, do not convince the reader of the value of cycling, preferably combined with some other form of recreation, I feel that there is no use in my further labouring the point.

THE END.



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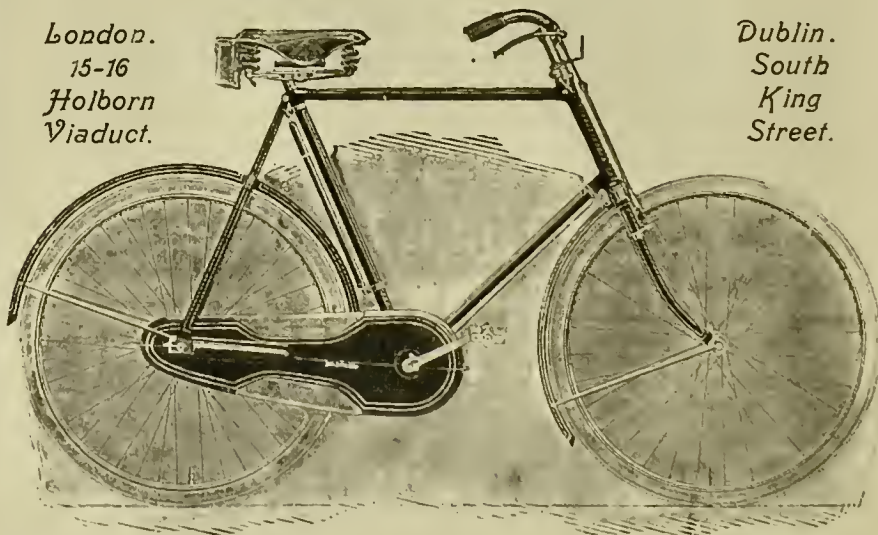
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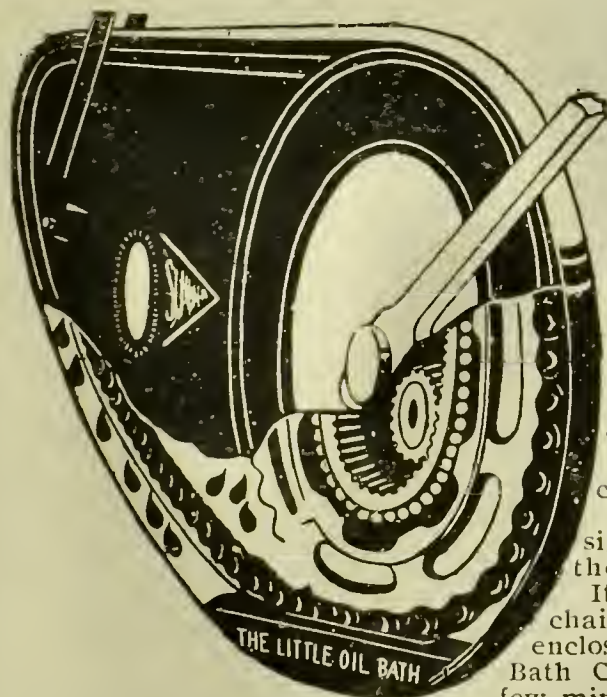
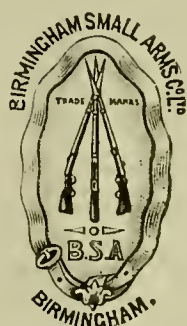
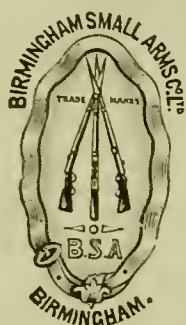
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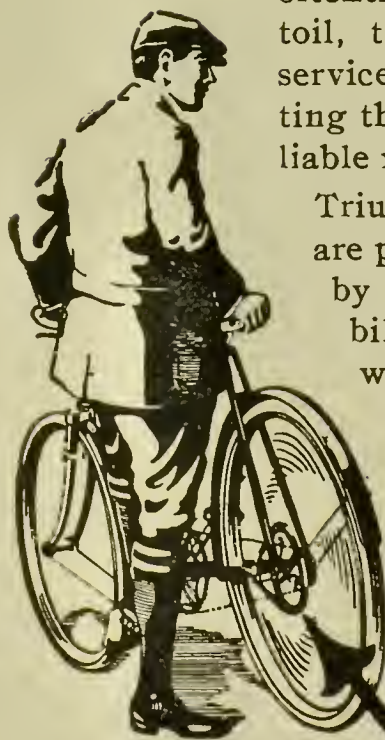
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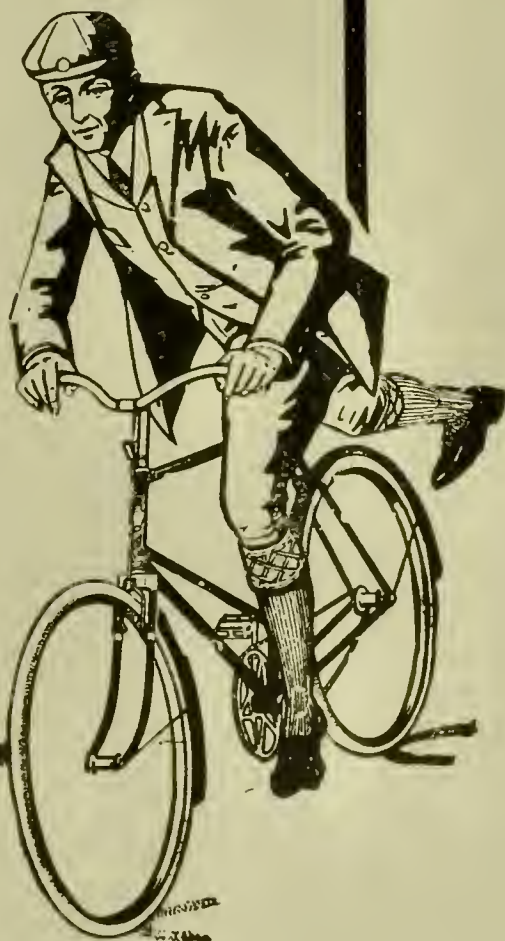
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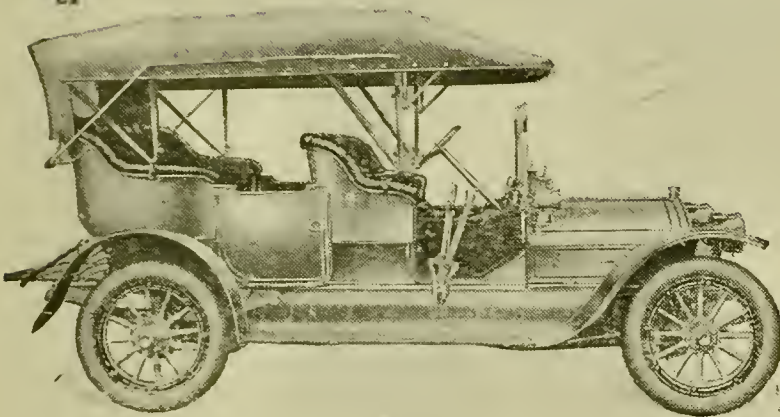
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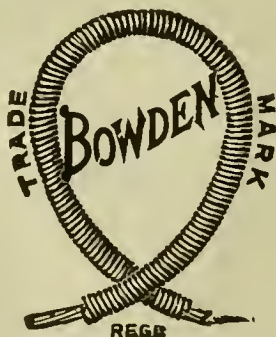
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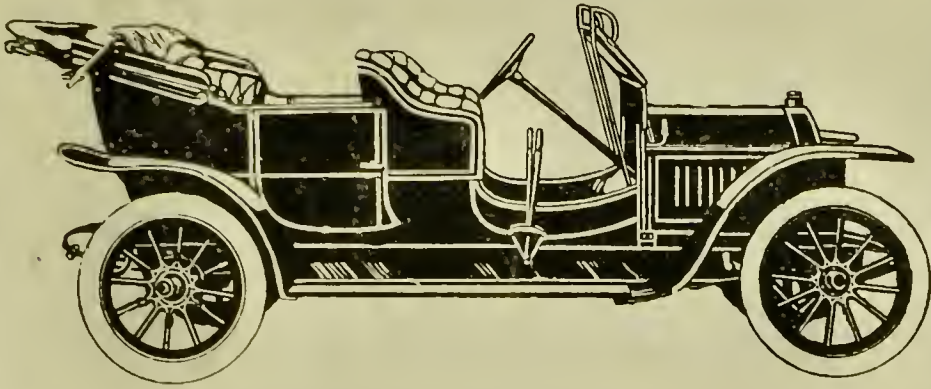


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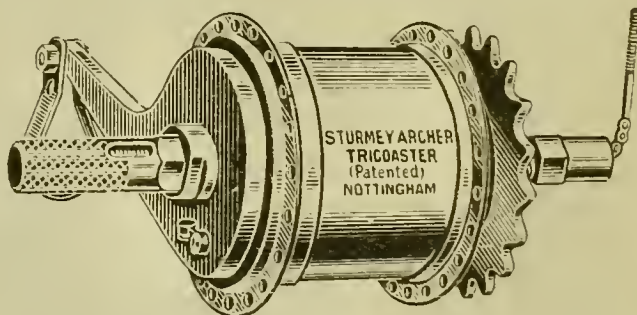
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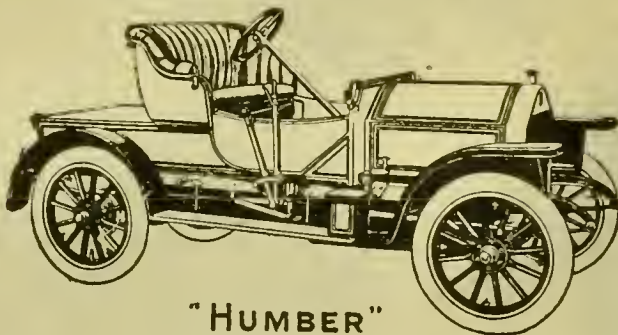
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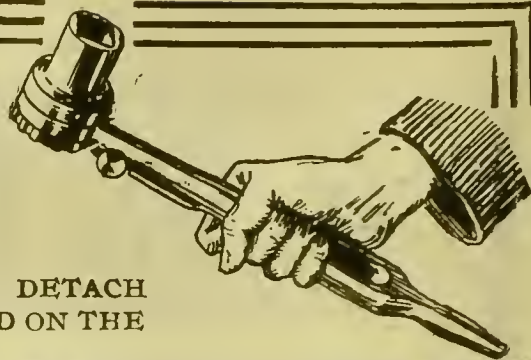
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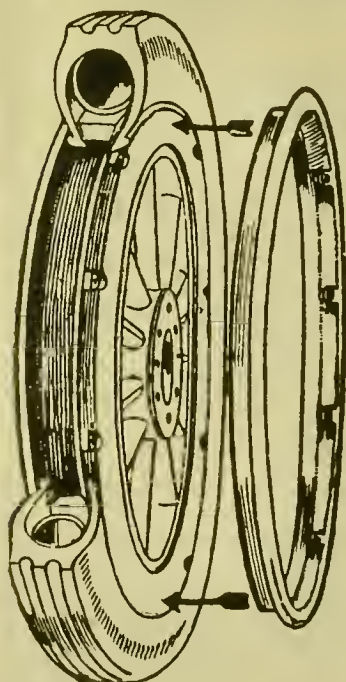


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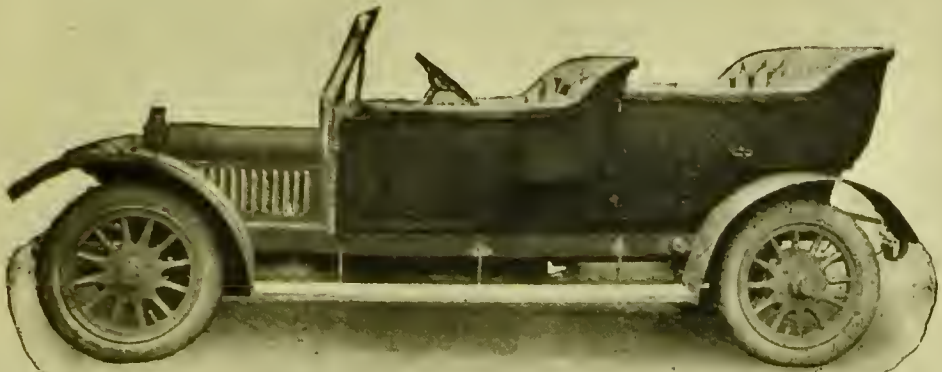
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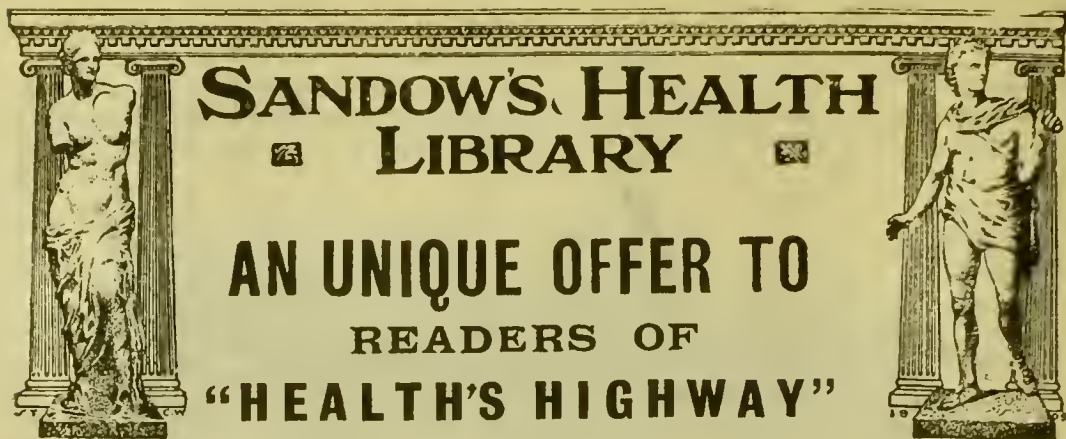
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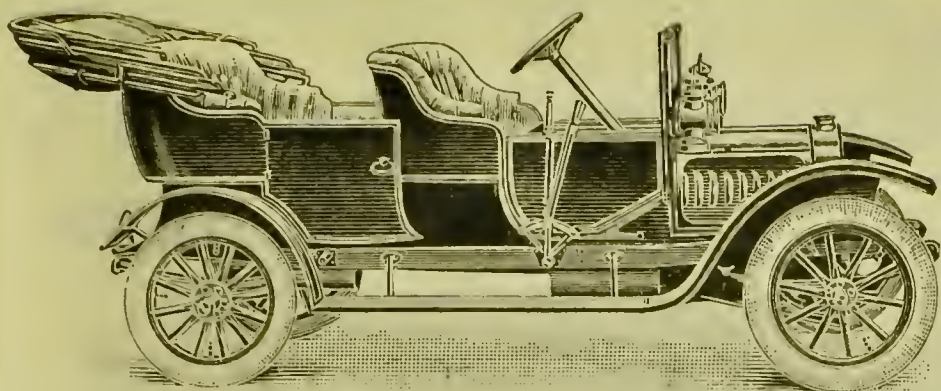
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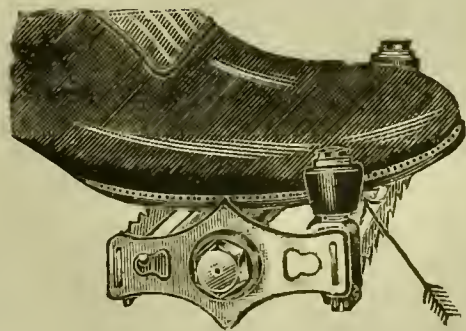
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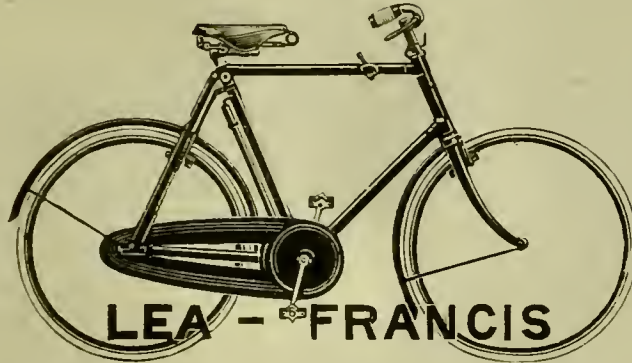
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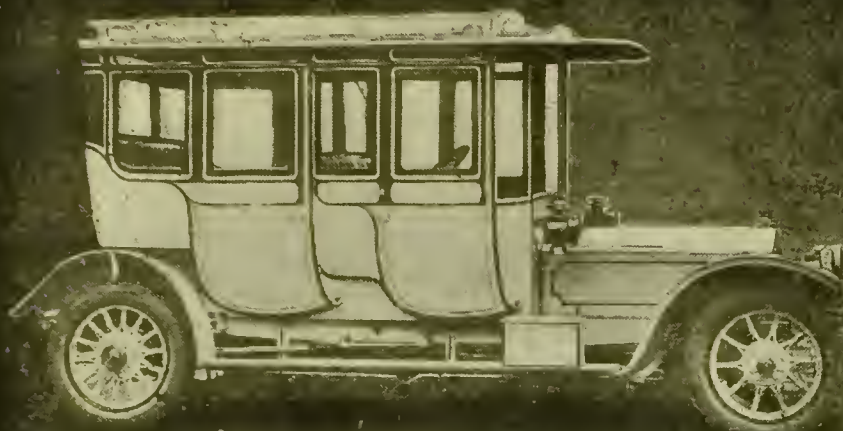
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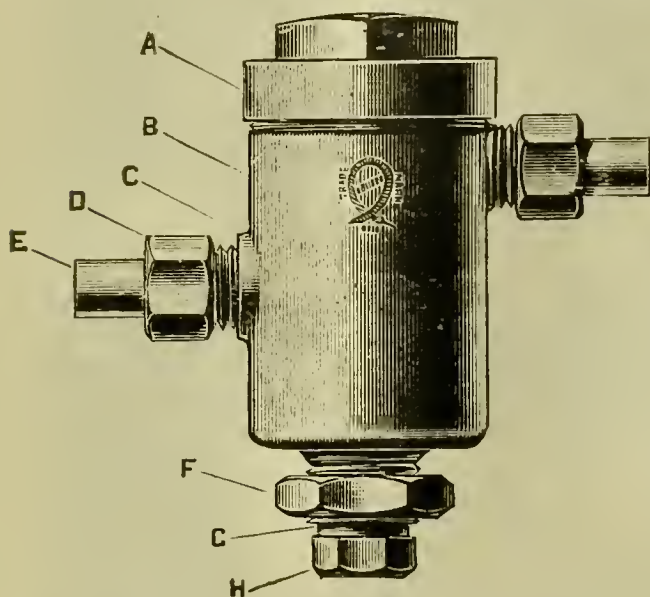
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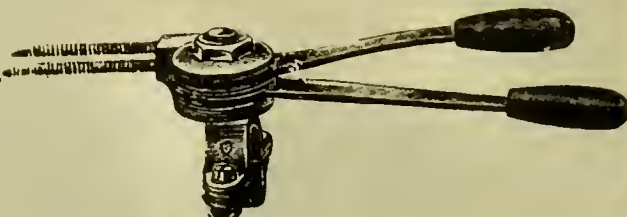
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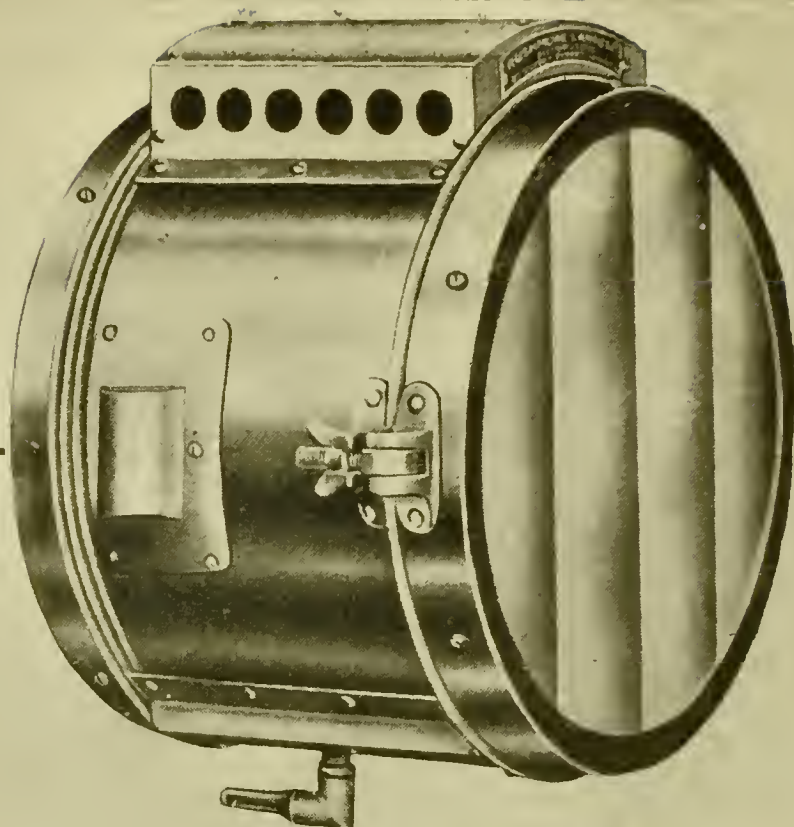
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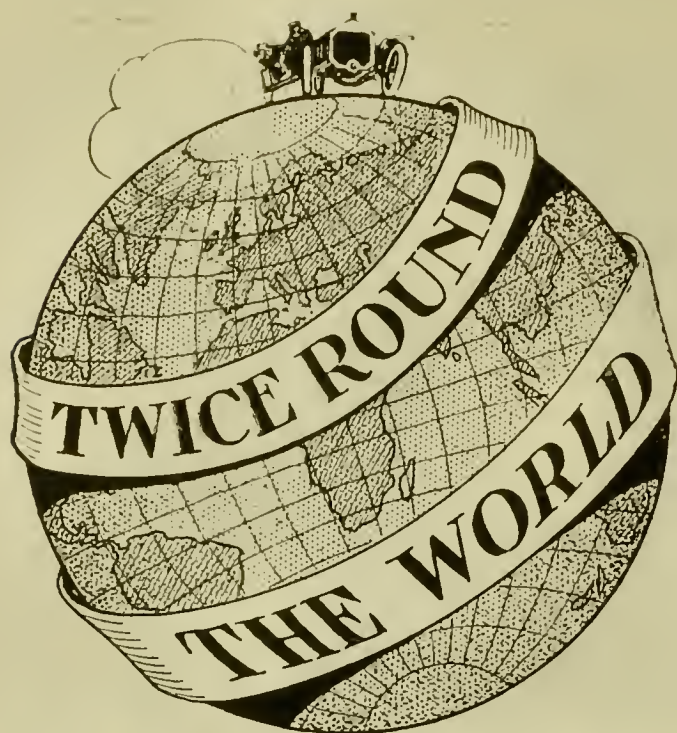
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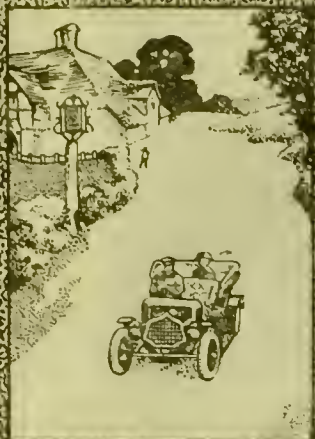
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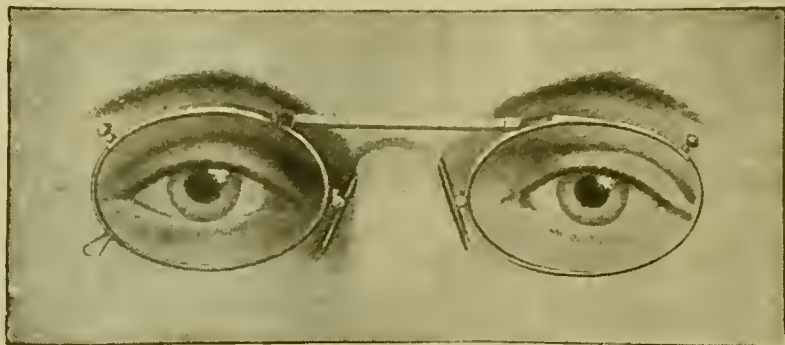
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